

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. claims: 1-9, 13
protective helmet

1.1. claims: 5-8
orientation of the air curtain nozzles

1.2. claim: 13
volume flow rate of the air pump

2. claim: 10
pulsation-free pump

3. claim: 11
piezo pump

4. claim: 12
frequency range of the pump > 500 Hz

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: **1-9, 13**

- Remark on Protest**
- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
 - The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
 - No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2020/057952

A. CLASSIFICATION OF SUBJECT MATTER

A62B 18/00(2006.01)j

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A62B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 102015122316 A1 (ALFRED KÄRCHER GMBH & CO KG [DE]) 22 June 2017 (2017-06-22)	1-10, 12, 13
Y	figures 1-3, 10-13, 19-29 paragraph [0110] - paragraph [0156]	11
X	DE 835635 C (MARINUS CHRISTENSEN) 03 April 1952 (1952-04-03)	1-3, 5-10, 12, 13
Y	page 2, line 66 - page 3, line 36	11
A	figures	4
Y	SG 2013097183 A (SINGAPORE TECH DYNAMICS PTE [SG]; TEMASEK POLYTECHNIC [SG]) 30 July 2015 (2015-07-30) paragraph [0008]; figures 1, 2	11

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

“A” document defining the general state of the art which is not considered to be of particular relevance

“E” earlier application or patent but published on or after the international filing date

“L” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

“O” document referring to an oral disclosure, use, exhibition or other means

“P” document published prior to the international filing date but later than the priority date claimed

“T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

“X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

“Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

“&” document member of the same patent family

Date of the actual completion of the international search

31 July 2020

Date of mailing of the international search report

10 August 2020

Name and mailing address of the ISA/EP

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/EP2020/057952

Patent document cited in search report	Publication date (day/month/year)	Patent family member(s)	Publication date (day/month/year)
DE 102015122316 A1	22 June 2017	DE 102015122316 A1	22 June 2017
		WO 2017103246 A1	22 June 2017
DE 835635 C	03 April 1952	NONE	
SG 2013097183 A	30 July 2015	NONE	