# 

# (11) **EP 3 636 821 A3**

(12)

### **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3: 13.05.2020 Bulletin 2020/20

(51) Int Cl.: **D06C 7/00** (2006.01) D06F 58/12 (2006.01)

F26B 13/00 (2006.01)

(43) Date of publication A2:

15.04.2020 Bulletin 2020/16

(21) Application number: 19203018.7

(22) Date of filing: 14.10.2019

(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: 12.10.2018 KR 20180122166

(71) Applicant: ISW Co., Ltd.

Gyeongsangbuk-do 39367 (KR)

(72) Inventor: KIM, Jae Young Daegu (KR)

(74) Representative: dompatent von Kreisler Selting Werner -

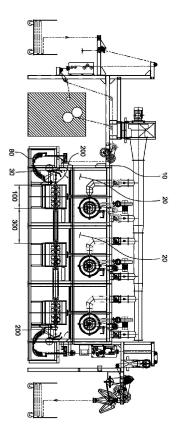
Partnerschaft von Patent- und Rechtsanwälten mbB

Deichmannhaus am Dom Bahnhofsvorplatz 1 50667 Köln (DE)

# (54) CONTINUOUS TUMBLER APPARATUS WITH BUFFER ZONE

(57)A continuous tumbler apparatus having a buffer zone with a reformed structure is proposed. The apparatus includes: a casing (10) having a plurality of chambers (20) therein in which a textile fabric (30) is conveyed from outside to inside; hot air supply units (200) disposed inside the casing (10) and serving as conveying passages of the textile fabric (30); a plurality of nozzle zones (100) disposed in each of the chambers (20) and provided with injection nozzles (110) which are respectively disposed on upper and lower sides of the hot air supply units (200) and inject hot air to enable conveying the textile fabric (30) in one or the other direction; and the buffer zones (300) provided between the nozzle zones (100) and having discharge holes (325) provided therein for discharging the hot air injected from the injection nozzles (110) upward and downward.

FIG. 1



EP 3 636 821 A3



#### **EUROPEAN SEARCH REPORT**

Application Number

EP 19 20 3018

5	•	<u></u>				
		]				
	Category	, Citation of document with ir of relevant passa	ndication, where appropriate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)	
10	X	US 2 559 413 A (JUL 3 July 1951 (1951-0 * column 2, line 32 * figures 1-4 *		1-3,5-7	INV. D06C7/00 F26B13/00	
15	A	AL) 29 January 2004	CLEARY JOHN C [US] ET (2004-01-29) claim 1; figure 1 *	1-8	ADD. D06F58/12	
20	A	KR 101 758 243 B1 ( 14 July 2017 (2017- * abstract; claims	07-14)	1		
	A	KR 101 798 930 B1 ( 12 December 2017 (2 * abstract; claims	(017-12-12)	1		
25						
30					TECHNICAL FIELDS SEARCHED (IPC)  D06F D06C	
35						
40						
45						
	1	The present search report has been drawn up for all claims				
		Place of search	Date of completion of the search	<u>'</u>	Examiner	
	0400	Munich	31 March 2020	Weinberg, Ekkehard		
55	X:par Y:par doc A:tec	CATEGORY OF CITED DOCUMENTS  ticularly relevant if taken alone ticularly relevant if combined with anot ument of the same category hnological background n-written disclosure	nvention shed on, or			
	P: inte	ermediate document	document	& : member of the same patent family, corresponding document		

2

## EP 3 636 821 A3

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

EP 19 20 3018

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.

31-03-2020

10	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
	US 2559413 A	03-07-1951	NONE	
15	US 2004016143 A1	29-01-2004	CN 1672003 A CN 101165255 A EP 1535009 A1 EP 2251475 A2 JP 4137055 B2 JP 4891280 B2	21-09-2005 23-04-2008 01-06-2005 17-11-2010 20-08-2008 07-03-2012
20			JP 5053138 B2 JP 2005534886 A JP 2008196104 A JP 2008196105 A JP 2008231655 A US 2004016143 A1	17-10-2012 17-11-2005 28-08-2008 28-08-2008 02-10-2008 29-01-2004
25			US 2004034942 A1 US 2004040179 A1 US 2004045186 A1 WO 2004011864 A1	26-02-2004 04-03-2004 11-03-2004 05-02-2004
30	KR 101758243 B1	14-07-2017	NONE	
35	KR 101798930 B1	12-12-2017 	NONE 	
40				
45				
50	o o			
55	FORM P0459			

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