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Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: A BLENDER

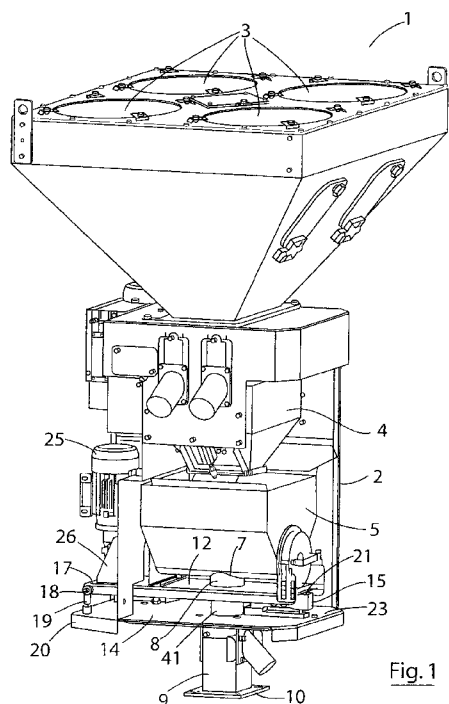


Fig. 1

(57) Abstract: A blender (1) has a frame (2). A number of raw material storage bins (3) are mounted at a top of the frame (2). Suspended on the frame (2) beneath the raw material storage bins (3) is a weigh hopper (4). Mounted beneath the weigh hopper (4) on the frame (2) is a mixing chamber (5) for reception of materials to be blended from the weigh hopper (4). A mixer, in this case provided by a mixing screw (6), is provided at a bottom of the mixing chamber (5) for blending materials within the mixing chamber prior to discharge of blended materials through a material outlet (7) at a bottom of the mixing chamber (5). The material outlet (7) discharges blended material into a material discharge pipe (8) and through an outlet duct (9) having a flanged end (10) for mounting the blender (1) on a processing line such as a plastics extruder. The mixing chamber (5) is mounted on a cantilevered support platform (12) on a base plate (14) of the frame (2) and cooperates with a load cell (15) mounted on the base plate (14) to provide a measurement of the weight of the mixing chamber and materials therein to determine the weight of the materials within the mixing chamber.

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27 October 2016

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2016/056176

A. CLASSIFICATION OF SUBJECT MATTER

INV. B01F7/08 B01F15/04 B01F3/18 B01F5/24
ADD. B29B7/60

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)

B01F B29B

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, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 20 34 837 A1 (MEYER SPEZIALMASCH BRUNO) 20 April 1972 (1972-04-20)	1
A	page 1, paragraph 1 - paragraph 2 page 3, paragraph 1 - paragraph 2 page 4, paragraph 2 - page 5, paragraph 1 page 6, paragraph 5 - page 7, paragraph 2 figures	2-5, 19
X	DE 199 39 042 A1 (ALFONS TSCHITTER GMBH [DE]) 8 March 2001 (2001-03-08)	1-5
Y	column 1, line 1 - line 3 column 2, line 46 - line 51 column 2, line 56 - line 65 column 4, line 41 - line 46 column 4, line 62 - column 5, line 44 column 6, line 21 - column 7, line 39 figures 1,2	19
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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

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Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2016/056176

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2009/136419 A1 (ARIOSTEA S P A [IT]; PANCIOLO CARLO [IT]) 12 November 2009 (2009-11-12)	1-5
Y	page 1, line 1 - line 4 page 6, line 6 - line 12 page 10, line 4 - line 32 page 12, line 1 - line 20 figures	19
Y	----- EP 2 143 484 A1 (VERVANT LTD [IE]) 13 January 2010 (2010-01-13) cited in the application	19
A	the whole document -----	1-5

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2016/056176

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

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:

see additional sheet

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 an 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.:
1-5, 19

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-5, 19

A blender including a weigher for weighing the mixing chamber wherein the weigher is connected to a controller operable to control a related process, and a mixing screw with a pair of mixing blades of opposite pitch.

1.1. claims: 1-5

A blender including a weigher for weighing the mixing chamber wherein the weigher is connected to a controller operable to control a related process.

1.2. claim: 19

A blender including a weigher for weighing the mixing chamber and a mixing screw with a pair of mixing blades of opposite pitch.

2. claims: 6, 7, 20

A blender including a weigher for weighing the mixing chamber wherein the mixing chamber is mounted on a cantilevered support platform.

3. claims: 8-18

A blender including a weigher for weighing the mixing chamber wherein the outlet of the mixing chamber is provided with a baffle to regulate the flow of blended materials.

4. claims: 21-31

A blender including a discharge pipe provided at its outlet which is provided with a baffle to regulate the flow of blended materials.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2016/056176

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 2034837	A1	20-04-1972	NONE
DE 19939042	A1	08-03-2001	NONE
WO 2009136419	A1	12-11-2009	CA 2723467 A1 12-11-2009 EP 2274143 A1 19-01-2011 US 2011112220 A1 12-05-2011 WO 2009136419 A1 12-11-2009
EP 2143484	A1	13-01-2010	AT 543563 T 15-02-2012 EP 2143484 A1 13-01-2010 US 2010065149 A1 18-03-2010 US 2013135958 A1 30-05-2013 US 2015375186 A1 31-12-2015