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(54) **MACHINE FOR PRESSURE CASTING CERAMIC MATERIALS AND COMPOUNDS, WITH WEIGHT ZEROING APPARATUS**

(57) Machine (100) for casting ceramic materials and compounds with weight zeroing apparatus adapted for reducing to a minimum the physical effort required by operators on site, said machine (100) being developed in height, allowing to increase production and saving space and energy. The machine (100) comprises a frame (10); a control panel (11); molds formed by a female part (19') and a male part (19); a lower movable cradle (15) with at least one female part (19'), mobilized towards the intermediate movable cradle (14), allowing the closure of the molds (19-19'); an upper movable cradle (13) with at least one male part (19), mobilized towards said intermediate movable cradle (14), allowing the closure of further molds (19-19'); an intermediate movable cradle (14) with corresponding male parts (19) and female parts (19'), positioned between said lower movable cradle (15) and said upper movable cradle (13); a weight zeroing trolley (12) which, when aligned with one of said movable cradles (13, 14, 15), allows the removal, without physical effort, of the molds (19-19') by an operator.

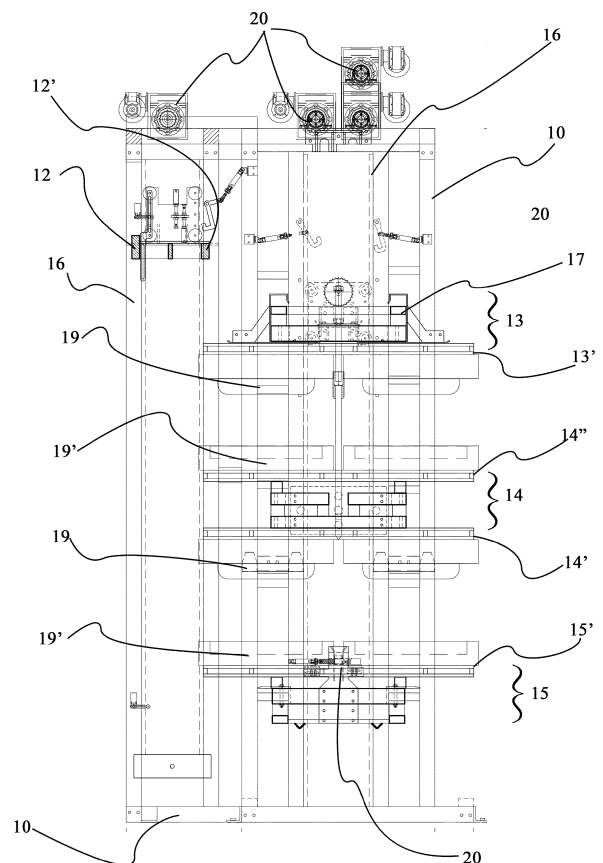


Fig. 2



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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)
Y	CN 213 260 049 U (GUANGDONG JINMA LEADING INTELLIGENT TECH CO LTD) 25 May 2021 (2021-05-25) * the whole document *	1-6	INV. B28B17/00 B28B1/26 B28B1/28 B28B7/24 B28B11/24
Y	CN 106 239 699 A (JOMOO KITCHEN & BATH APPLIANCES CORP) 21 December 2016 (2016-12-21) * the whole document *	1-6	
A	GB 2 594 142 A (PCL CERAMICS LTD [GB]) 20 October 2021 (2021-10-20) * paragraphs [0001], [0065], [0075], [0076] * * paragraph [0097] * * figures 3-5 *	1-6	
A	CN 106 671 250 A (JOMOO KITCHEN & BATH APPLIANCES CORP) 17 May 2017 (2017-05-17) * the whole document *	1-6	
A	WO 2020/231363 A1 (UNIMAK MAKINA SANAYII VE TICARET A S [TR]) 19 November 2020 (2020-11-19) * page 1, lines 7-9 * * page 3, lines 14-20 * * page 5, lines 26-31 * * page 6, lines 2-7 * * page 7, lines 28-37 * * figures 1-3, 10 *	1-6	TECHNICAL FIELDS SEARCHED (IPC) B28B B30B
A	CN 111 975 938 A (XUPU YIFENG FINE CERAMIC IND CO LTD) 24 November 2020 (2020-11-24) * the whole document *	1-6	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 24 August 2023	Examiner Papakostas, Ioannis
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.

☐ 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):

☐ 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

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

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

☐ 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:

☒ 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:

1-6

☐ 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

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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:

1. claims: 1-6

Machine for casting ceramic materials, with three superimposed and vertically movable cradles for male and female mould parts, the cradles being configured to rotate the moulds by 180°, the machine further comprising a trolley, vertically movable next to the cradles so that it may be aligned with each of them to facilitate the replacement of the mould parts.

2. claims: 7, 8

Machine for casting ceramic materials with electrically actuated, heat emitting shutters.

3. claim: 9

Machine for casting ceramic materials, with upper movable cradle having at least four adjustable brackets per male mould part mounted thereon, in order to improve the closing of the moulds and exert a balanced stress relief during casting of the ceramic material.

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

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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
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24-08-2023

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