(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 3 048 215 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
27.07.2016 Bulletin 2016/30

(51) Int Cl.:
E04G 21/20 *(2006.01)*

(21) Application number: **15460012.6**

(22) Date of filing: **30.04.2015**

(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:
MA

(30) Priority: **26.01.2015 PL 12374515**

(71) Applicant: **Zaklad Ceramiki Budowlanej "OWCZARY" R.E.R. Stepien sp.j**
26-341 Mniszków (PL)

(72) Inventors:
- **Stepien, Rafal**
  26 -300 Opoczno (PL)
- **Janiszewski, Andrzej**
  97 - 300 Piotrków Trybunalski (PL)

(74) Representative: **Dziubinska, Joanna**
Kancelaria Patentowa Dziubinska
Al. Kard. Stefana Wyszynskiego 58/25
PL-94-047 Lodz (PL)

Remarks:
Amended claims in accordance with Rule 137(2) EPC.

(54) THE FRAME FOR PROPORTIONING AND APPLICATION OF MORTAR

(57) The frame for proportioning and application of mortar, characterised by the fact that in the central part of a quadrangular through construction (1) there is placed a strip (2), and on one side of the quadrangular construction (1) there are fastenings, and the fastenings are placed at the ends of the construction (1) in such a way that they form a straight angle with the construction (1), and over the construction (1), at its both shorter sides, there are placed handles (4).

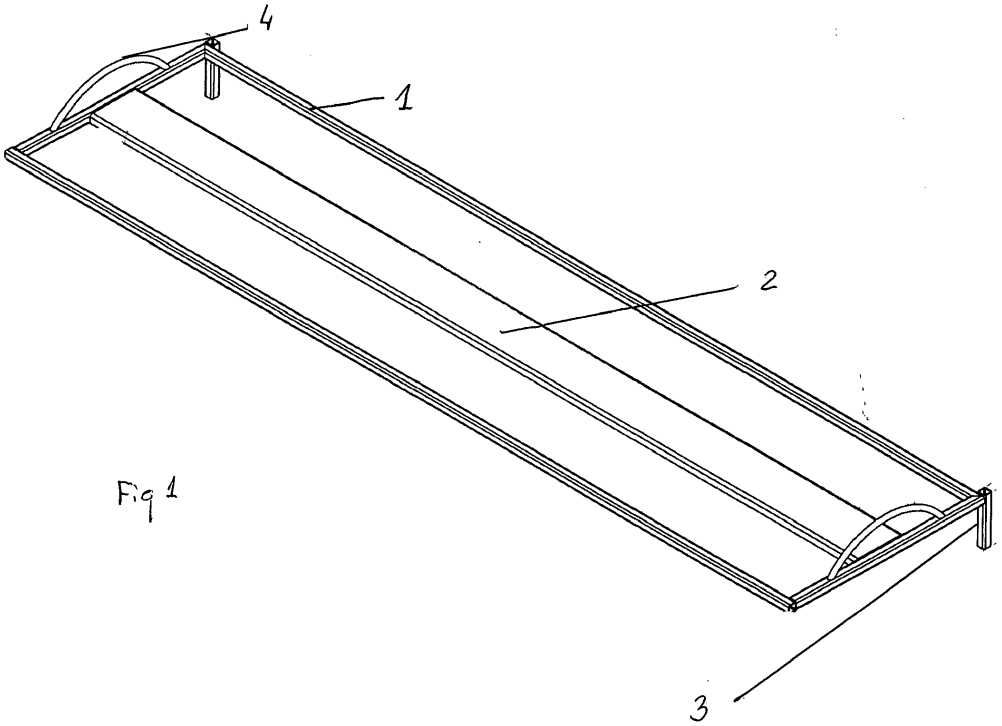

Fig 1

EP 3 048 215 A1

Description

[0001] The subject of the utility model is a new and original frame for proportioning and application of mortar, intended for use in building industry.

[0002] There are known different devices for proportioning of mortar and facilitating its application.

[0003] From the description of the utility model no. Ru 58515 there is known "An element for the application of an adhesive and for the sealing of joints", which has a form of a cuboid, on one wall of which there is a narrowing tunnel with an arched vault. The base of the narrowing tunnel has the shape of isosceles trapezium.

[0004] From the description of the invention no. 185741 there is known "A device for continuous and even pouring of abrasive grains, especially onto a moving paper ribbon or linen base in a continuous process of the manufacture of poured abrasive products", which has a vibrating pouring plate slightly turned down from the plane forcing vibrations; and the pouring plate is fixed to a rigid structural beam. The beam is fixed permanently to flexible elements. The pouring plate is in a slight, vertical distance from the pouring throat of the open container, and the central part of the rear wall of the structural beam is connected to a vibrator. Under the outlet opening there is fixed at least one, replaceable, not too wide, flat sieve with the mesh size depending on the granulation of poured abrasive grains.

[0005] The essence of the solution consists in the fact that in the central part of the quadrangular through construction there is placed a strip, and on one side of the quadrangular construction there are placed fastenings; and the fastenings are placed at the ends of the construction in such a way that they form a right angle with the construction, and fastenings are placed over the construction, on its both shorter sides.

[0006] The frame for proportioning and application of mortar according to the model facilitates even application and proportioning of ready mortar. As a result of the application of the frame according to the model, the wall is built evenly (always the same thickness of joint). Therefore, the economic use of mortar is guaranteed, which automatically translates into financial savings. Due to the construction of the frame (the internal dimensions of the frame (1) are smaller than its external dimensions), in the process of bricklaying (adjusting and pressing of, e.g., bricks) the joint always remains on the brick surface and does not go beyond the dimensions of the bricks/ the constructed wall. Therefore, the use of the frame according to the model and the even application of the mortar makes the constructed wall aesthetic due to the optical appearance of joints.

[0007] Additionally, the use of the frame eliminates thermal bridges, guaranteeing the isolation between the cold and warm spheres of the constructed wall, which gives additional savings during heating and exploitation of the building.

[0008] The width of the frame for proportioning and application of mortar according to the model corresponds to the width of the brick, hollow brick, or other material, from which the wall is constructed. The length of the frame is not determined, and utility and functional aspects are decisive: it should be comfortable to hold and move by one person. The application of the mortar is made in the following way: on the constructed fragment of the wall the frame according to the model is placed, then the mortar is applied in such a way that it fulfills the whole depth of the frame. All that goes beyond the frame is removed and that is why the joints in the wall are always the same. In the centre of the frame there is a strip causing the appearance of air spaces in the mortar during the construction. Due to the air spaces the so-called thermal bridge is eliminated and cold and warm spheres in the constructed wall become isolated. After the mortar is put on the place limited by the frame and its excess is removed, the frame is taken away and a subsequent layer of bricks is laid on the mortar formed in that way.

[0009] The subject of the utility model is presented on enclosed illustrations, fig. 1 - 4, where the frame has been shown according to the model:

Fig. 1 - the frame in the perspective projection

Fig. 2 - the frame seen from above

Fig. 3 - the frame seen from the longer side

Fig. 4 - the frame seen from the shorter side,

[0010] The frame for proportioning and application of mortar according to the model consists of a quadrangular, rigid and through construction (1), which has the same depth on its whole area. The frame is placed on the constructed wall and the whole depth of the frame is filled with mortar. On one side of the quadrangular construction (1) there are placed fastenings (3), which guarantee a stable and adjustable positioning of the frame, and consequently, of mortar on the constructed wall. The fastenings form a right angle with the construction (1). It prevents the frame from being unsteady, as well as its movements during the application of the mortar and the removal of its excess. Along the whole central part of the quadrangular construction (1) there is placed a strip (2). During the bricklaying the strip causes the appearance of air spaces in the mortar, thus eliminating thermal bridges. The use of the strip (2) contributes to better isolation between the cold and warm spheres of the constructed wall. Over the construction (1), on its both shorter sides there are placed handles (4) for carrying of the whole frame.

An embodiment:

[0011] The frame for proportioning and application of mortar according to the model consists of a rectangular, metal construction (1), which has the same depth on its

whole area. Due to the construction of the frame (internal dimensions are smaller from external ones by 1 cm), during the bricklaying process (adjusting and pressing of bricks or other material, from which the wall is constructed) the joint always remains on the brick surface and does not go beyond the dimensions of the brick/ building material. After the frame is placed on the constructed wall, the whole depth of the frame is filled with mortar. Therefore the wall is even (the thickness of the joint is fixed at 1cm). The process guarantees an economic use of mortar, which automatically brings about financial savings. On one side of a quadrangular construction (1) there are placed fastenings which allow to fix the frame on the wall in a stable way. Along the whole central part of the quadrangular construction (1) there is placed a strip (2) of the uniform width. During the bricklaying the strip causes the appearance of air spaces in the mortar. Over the construction (1), at its both shorter sides, there are placed rounded handles (4) for carrying of the frame.

[0012] The embodiment does not limit the model.

Claims

1. The frame for proportioning and application of mortar with a quadrangular rigid construction, handles and fastenings, **characterised by** the fact that in the central part of a quadrangular through construction (1) there is placed a strip (2), and on one side of the quadrangular construction (1) there are fastenings, and the fastenings are placed at the ends of the construction (1) in such a way that they form a straight angle with the construction (1), and over the construction (1), at its both shorter sides, there are placed handles (4).

Amended claims in accordance with Rule 137(2) EPC.

1. The frame for proportioning and application of mortar with a quadrangular rigid construction, handles and fastenings, **characterised by** the fact that in the central part of a quadrangular through construction (1) there is placed a strip (2), which at the formation of an air space in mortar joints in the process of construction to eliminate the so-called thermal bridges, and on one side of the quadrangular construction (1) there are fastenings (3), and the fastenings are placed at the ends of the construction (1) in such a way that they form a straight angle with the construction (1).

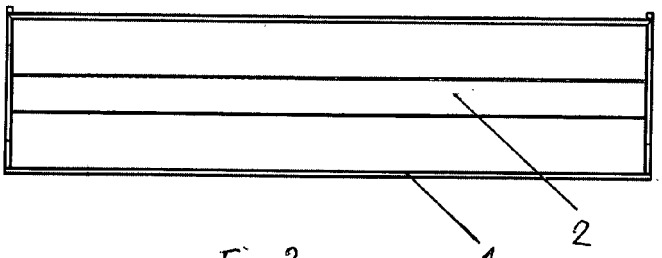

Fig 2

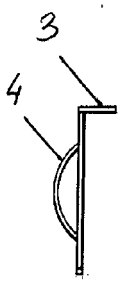

Fig 4

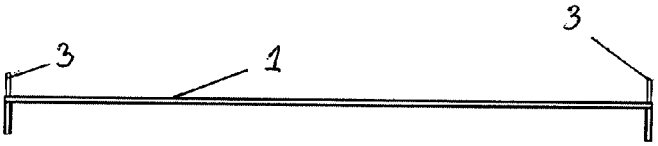

Fig 3

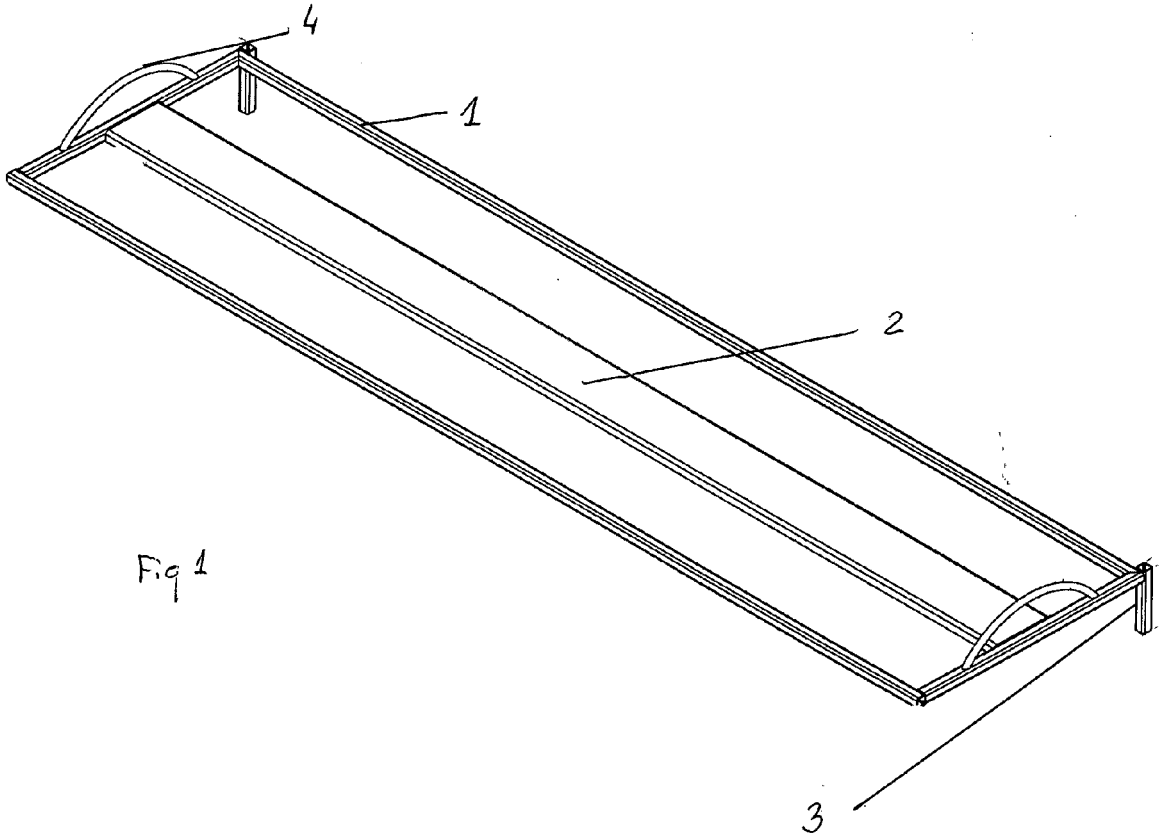

Fig 1

Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 15 46 0012

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 1 594 775 A (GRESLEN JOSEPH P) 3 August 1926 (1926-08-03) * page 1, left-hand column, line 5 - line 13 * * page 1, right-hand column, line 62 - page 2, left-hand column, line 41; figures 1-5 * -----	1	INV. E04G21/20
X	US 1 679 007 A (REAGAN GEORGE D) 31 July 1928 (1928-07-31) * page 1, right-hand column, line 77 - page 2, right-hand column, line 86; figures 1,5 * -----	1	

TECHNICAL FIELDS SEARCHED (IPC)

E04G

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	31 March 2016	Melhem, Charbel

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

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 15 46 0012

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.

31-03-2016

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 1594775 A	03-08-1926	NONE	
US 1679007 A	31-07-1928	NONE	

EPO FORM P0459

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

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- RU 58515 **[0003]**
- RU 185741 **[0004]**