

(19)



Europäisches Patentamt

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(11)

EP 0 657 261 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:

30.08.2000 Bulletin 2000/35

(51) Int Cl.7: **B28C 7/04**

(21) Application number: **95200067.7**

(22) Date of filing: **23.10.1991**

(54) **Device for dosing and mixing fractions for a specific mortar**

Vorrichtung für Dosierung und Mischung von Bruckteilen einer bestimmten Mörtels

Dispositif pour le proportionnement et le mélange de fractions pour un mortier spécifique

(84) Designated Contracting States:
AT BE CH DE DK ES FR GB IT LI LU NL SE

(30) Priority: **24.10.1990 NL 9002321**

(43) Date of publication of application:
14.06.1995 Bulletin 1995/24

(62) Document number(s) of the earlier application(s) in
accordance with Art. 76 EPC:
91202749.7 / 0 482 720

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Description

[0001] The invention relates to a device for dosing and mixing fractions for a mortar suitable for pointing, bricklaying and/or floors and consisting of at least a bonding agent or binder such as a cement and a sand fraction provided with a silo having compartments for each fraction, a dosing unit arranged under the silo, said dosing unit consisting of a housing slidable relative to the outlet of the silo and provided with a number of dosing chambers and with a valve closing the outlet opening of a silo, wherein beneath the slidable housing is arranged a fixed base plate having a passage opening offset relative to the outlet opening of the silo for discharging the fractions out of the dosing housing.

[0002] Such a device is disclosed in US-A-3,746,313.

[0003] Owing to a dosing unit having a number of dosing chambers, the mass to be mixed is always in the correct ratio for the specific application of the mortar. However, as one or more fractions can have a sticky nature the dosing unit can not be filled or emptied completely during said dosing process.

[0004] Therefore the invention recommends a measuring means attached to the base plate in order to measure the zero weight and the maximum weight of the dosing unit, so determining in a simple manner the correct ratio for the mixture. In order to fill up the different dosing chambers with the fractions from the silo the invention further suggests to provide the dosing unit with a shaking or vibrating means, for example a motor having eccentric masses.

[0005] Mentioned and other features will be further elucidated in the figure description hereinbelow of a number of embodiments. In the drawing:

Fig. 1 is a perspective top view of the underside of the silo with dosing unit according to the invention, fig. 2 is a side view of the embodiment of fig. 1, which is provided here, however, with a weight measuring means.

[0006] Fig. 1 shows an embodiment of the silo 1 and dosing unit, wherein the dosing unit consists of a dosing housing 55 provided with three dosing chambers 56. The latter connect onto the compartment silo 1 which is provided here with two partitions 2'. Because the partitions are arranged at a determined position in the dosing housing 55, the content of the dosing chamber 56 in the dosing housing 55 will differ depending on the desired volumetric mixing of the fractions for the mortar. The dosing housing 55 is closed on the underside by a fixed base plate 57 which leads to a passage opening 58 of a downward oriented funnel 59. The funnel 59 connects for instance onto a mixing device.

[0007] The dosing housing 55 is also provided with a closing plate 60 fixed thereto, the breadth of which corresponds with the breadth of the outlet opening of the silo 1 and the length of which corresponds with the

length of travel of the dosing housing 55 when this can slide reciprocally in the direction of arrow P1 from the position drawn in fig. 1 to the position above the passage opening 58. The sliding of the housing 55 can be carried out in any known manner and is depicted here as a gear rack and gear wheel drive, wherein the gear rack 61 is fixed to the valve 60 and the gear wheel 62 is driven by a reversible motor 63.

[0008] Fig. 2 shows an embodiment which corresponds substantially with that of fig. 1, with the understanding that in the base plate 57 is arranged a measuring device 64 which can generate a signal to the central control unit 8 such that only when a determined filling weight is reached in the dosing housing 55 is the displacing of the housing 55 started by the starting signal for the motor 63 from the central control unit 8. Mixing and applying will otherwise take place in the manner as known in the art.

[0009] The central control unit 8 can also be provided with a protection during the zero measuring of the dosing unit 55 such that, after reaching the zero weight, the valve 60 is returned to the closed position. Thus ensured is that the dosing unit 55 is completely emptied.

[0010] Proposed in fig. 1 is to embody the dosing unit 55 with a vibrating or eccentric mass motor (not shown), which is preferably arranged on the side of the cement dosing chamber. Thus is ensured that the dosing unit 55 is set into vibration and a correct quantity of cement can be carried out of the silo into the dosing unit in order to reach the desired weight in volumetric measured cement fraction.

Claims

1. Device for dosing and mixing fractions for a mortar suitable for pointing, bricklaying and/or floors and consisting of at least a bonding agent or binder such as a cement and a sand fraction provided with a silo (1) having compartments (2) for each fraction, a dosing unit arranged under the silo, said dosing unit consisting of a housing (55) slidable relative to the outlet of the silo (1) and provided with a number of dosing chambers (56) and with a valve (60) closing the outlet opening of the silo (1), wherein beneath the slidable housing is arranged a fixed base plate (57) having a passage opening (58) offset relative to the outlet opening of the silo (1) for discharging the fractions out of the dosing housing, **characterized in that** a measuring means (64) is arranged in the base plate (57) for determining the total filling weight and the zero weight of the dosing unit.
2. Device as claimed in claim 1, **characterized in that** the dosing unit is provided with a shaking or vibrating means, for example an eccentric masses motor.

Patentansprüche

1. Vorrichtung zum Dosieren und Mischen von Bestandteilen für einen Mörtel, der für das Verfugen, Mauern, und/oder für Böden geeignet ist und aus mindestens einem Bindemittel, wie einem Zement und einem Sandzuschlag besteht, mit einem Silo (1) mit Kammern (2) für jeden Bestandteil, eine unter dem Silo angeordneten Dosiereinheit, die aus einem Gehäuse (55) besteht, das relativ zum Auslaß des Silos (1) verschiebbar und mit einer Anzahl von Dosierkammern (56) versehen ist, und mit einem die Auslaßöffnung des Silos (1) verschließenden Schieber (60), wobei unterhalb des verschiebbaren Gehäuses eine feststehende Basisplatte (57) angeordnet ist mit einer relativ zur Auslaßöffnung des Silos (1) versetzten Durchgangsöffnung (58) zum Entnehmen der Bestandteile aus dem Dosiergehäuse, dadurch **gekennzeichnet**, daß an der Basisplatte (57) eine Meßeinrichtung (64) zum Bestimmen des gesamten Füllgewichtes und des Nullgewichtes der Dosiereinheit angeordnet ist.

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2. Vorrichtung nach Anspruch 1, dadurch **gekennzeichnet**, daß die Dosiereinheit mit einer Rüttel- oder Vibriereinrichtung, z.B. einem Motor mit Exzentermassen, versehen ist.

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Revendications

1. Dispositif pour doser et mélanger des fractions de composants pour constituer un mortier adapté pour le jointoiement, l'agencement de briques et/ou de dalles et constitué d'au moins un agent de liaison ou liant tel qu'un ciment et d'une fraction sable, comportant un silo (1) qui a des compartiments (2) pour chaque fraction, un ensemble de dosage disposé sous le silo, ledit ensemble de dosage comportant un boîtier (55) pouvant coulisser par rapport à la sortie du silo (1) et muni de plusieurs chambres de dosage (56) et d'une vanne (60) fermant l'ouverture de sortie du silo (1), dans lequel sous le boîtier pouvant coulisser est agencée une plaque de base (57) fixée ayant une ouverture (58) de passage décalée par rapport à l'ouverture de sortie du silo (1) pour décharger les fractions à l'extérieur du boîtier de dosage, caractérisé en ce qu'un moyen de mesure (64) est disposé dans la plaque de base (57) pour déterminer le poids de remplissage total et le poids zéro de l'ensemble de dosage.

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2. Dispositif selon la revendication 1, caractérisé en ce que l'ensemble de dosage est muni d'un moyen d'agitation ou de vibration, par exemple un moteur à masses excentrées.

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FIG. 1

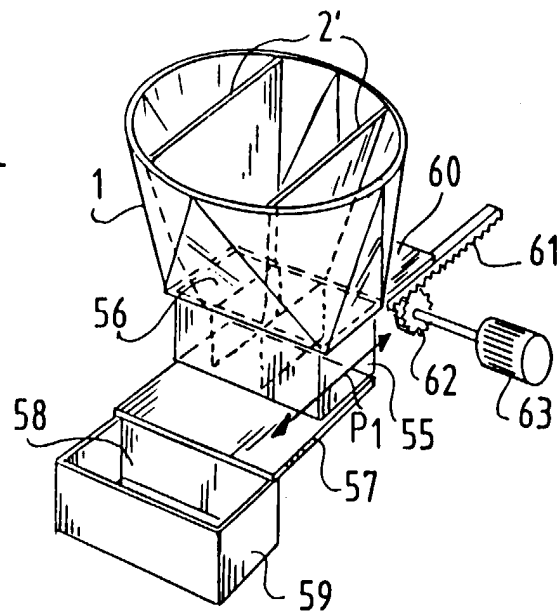


FIG. 2

