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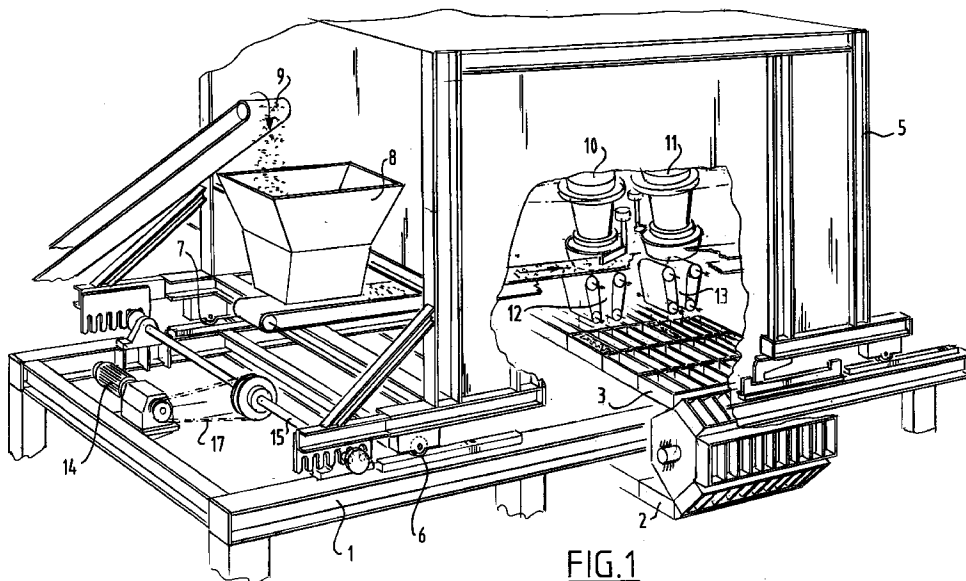
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**(54) Driving device for a filling device, displacable above mould containers, for forming green bricks from clay for the brick manufacturing industry**

(57) The invention relates to a device for manufacturing green bricks from clay for the brick manufacturing industry, comprising at least one supply device for successively supplying measured quantities of clay lumps along a roughly vertical fall path to a row of mould containers (3) supported by a mould container conveyor, wherein each clay lump is subjected to an accelerated movement in the fall path between the supply device

and the mould containers (3), characterized in that a plurality of rows of mould containers (3) are arranged, the supply device is received in a frame displaceable (5) in stepwise manner relative to the rows of mould containers (3), wherein the magnitude of a displacement step of the frame corresponds roughly to the distance between corresponding points on successive mould containers.



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## Description

The invention relates to a device for manufacturing green bricks from clay for the brick manufacturing industry, comprising at least one supply device for successively supplying measured quantities of clay lumps along a roughly vertical fall path to a row of mould containers supported by a mould container conveyor, wherein each clay lump is subjected to an accelerated movement in the fall path between the supply device and the mould containers.

Such a device is known for instance from the Netherlands patent 168.743.

It is the object of the invention to make such a device suitable for a higher production speed.

This is achieved according to the invention in that a number of rows of mould containers are arranged, the supply device is received in a frame displaceable in stepwise manner relative to the rows of mould containers, wherein the magnitude of a displacement step of the frame corresponds roughly to the distance between corresponding points on successive mould containers.

By displacing the supply device in stepwise manner the rows of mould containers can be filled successively with clay lumps.

The production speed can be practically doubled if at least two supply devices are arranged placed one behind the other as seen in the direction of movement.

The mould container support is preferably received in a frame which is fixed relative to the displaceable frame.

In order to obtain a good synchronous coordination between the different movements, the device is preferably embodied with an indexing device consisting of a support beam, which is coupled to the displaceable frame and has roughly U-shaped recesses, and rollers which engage one after the other in successive U-shaped recesses and are placed on the end portions of a rotation arm connected to a drive shaft.

Use is preferably made of intermittently displaceable mould containers. After filling of a series of successive rows of mould containers, the mould containers are then transported stepwise until a new row of mould containers has been placed beneath the supply device.

A sand-covering device can further be connected to the displaceable frame.

For acceleration of the movement the clay lump is guided between belt conveyors which impart an extra accelerated movement to the lump during the movement through the fall path.

The invention is now elucidated with reference to the drawings.

In the drawings:

Fig. 1 shows a perspective view of the device according to the invention, and

Fig. 2 shows a perspective view of the indexing device according to the invention.

Arranged in a fixed frame 1 is an intermittently displaceable mould container conveyor 2 which carries rows of mould containers 3 at regular distances. Co-acting with fixed frame 1 is a displaceable frame 5 which is displaceable relative to the fixed frame using rollers 6, 7. On the frame is placed a feed hopper 8 for sand which connects onto the discharge point 9 of a conveyor. Two supply devices 10, 11 for clay lumps are further arranged on the displaceable frame as according to fig. 1. The lumps of clay supplied by supply devices 10, 11 are fed through pairs 12 respectively 13 of belt conveyors which impart an acceleration to the falling clay lump such that it enters the mould containers lying thereunder at the desired speed. After filling of a row, carrier 2 transports through a predetermined pitch distance such that the following row of mould containers comes to lie beneath the discharge points of supply devices 10 and 11.

For displacement of displaceable frame 5 relative to fixed frame 1 use is made of an indexing device which imparts to the displaceable frame a displacement which is performed in stepwise manner. A drive shaft driven by an electric motor 14 is used for this purpose. Driving takes place by means of the output shaft of motor 14 with a transmission 17. At the end part (see fig. 2) of drive shaft 15 two rollers 19 respectively 20 are placed on the end portions of a rotation arm or rotation disc 18. Rollers 19 and 20 lie roughly diametrically opposite one another. When drive shaft 15 rotates clockwise in the direction designated by arrow P1 in fig. 2, the displaceable frame 5 will undergo a stepwise displacement in the direction indicated by arrow P2. This is the result of the co-action between rollers 19 and 20 and the indexing beam 21 in which roughly U-shaped recesses 22 are arranged at regular distances. The distance between the successive U-shaped recesses 22 is chosen such that, when rollers 19, 20 perform a movement from the one U-shaped recess to the next, the frame 5 performs a step which corresponds to the pitch between two successive rows of mould containers on mould container conveyor 2.

With the device according to the invention an operationally reliable control of the displacement of the supply devices for clay to mould containers is obtained, which is particularly suitable for a contaminated environment such as in the brick manufacturing industry.

## Claims

1. Device for manufacturing green bricks from clay for the brick manufacturing industry, comprising at least one supply device for successively supplying measured quantities of clay lumps along a roughly vertical fall path to a row of mould containers supported by a mould container conveyor, wherein each clay lump is subjected to an accelerated movement in the fall path between the supply device and the mould containers, **characterized in**

**that** a number of rows of mould containers are arranged, the supply device is received in a frame displaceable in stepwise manner relative to the rows of mould containers, wherein the magnitude of a displacement step of the frame corresponds roughly to the distance between corresponding points on successive mould containers. 5

2. Device as claimed in claim 1, **characterized in that** at least two supply devices are arranged placed one behind the other as seen in the direction of movement. 10
3. Device as claimed in claims 1-2, **characterized in that** the mould container conveyor is received in a frame which is fixed relative to the displaceable frame. 15
4. Device as claimed in claims 1-3, **characterized in that** the displacement performed in stepwise manner is defined by an indexing device consisting of a support beam, which is coupled to the displaceable frame and has roughly U-shaped recesses, and rollers which engage one after the other in successive U-shaped recesses and are placed on the end portions of a rotation arm connected to a drive shaft. 20  
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5. Device as claimed in claims 1-4, **characterized in that** the mould container conveyor is arranged for intermittent displacement. 30
6. Device as claimed in claims 1-5, **characterized in that** a discharge conveyor for green bricks is arranged under the mould container conveyor. 35
7. Device as claimed in claims 1-6, **characterized in that** a sand-covering device is further connected to the displaceable frame. 40
8. Device as claimed in claims 1-7, **characterized in that** the clay lump is guided between belt conveyors for acceleration of the movement. 45

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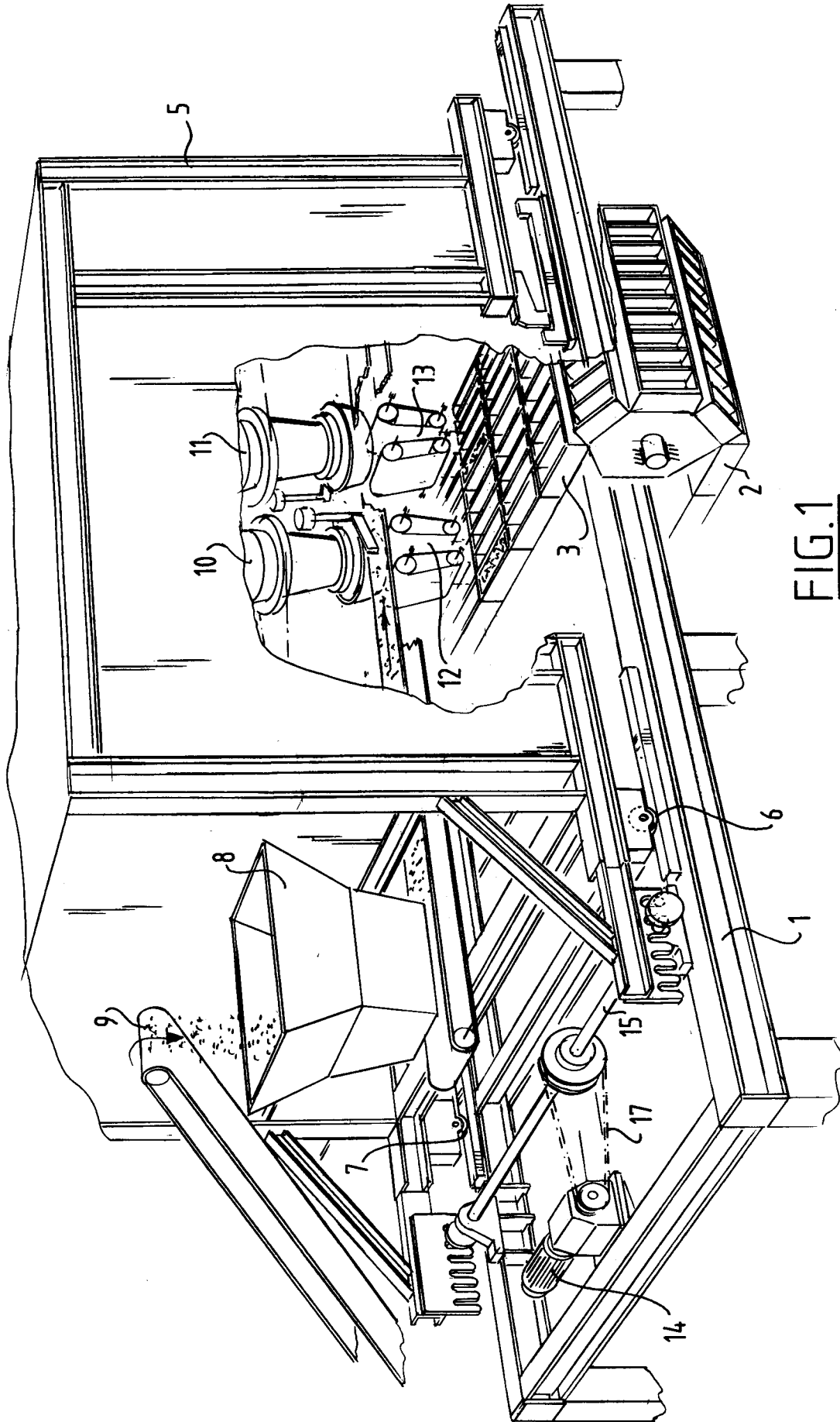


FIG. 1

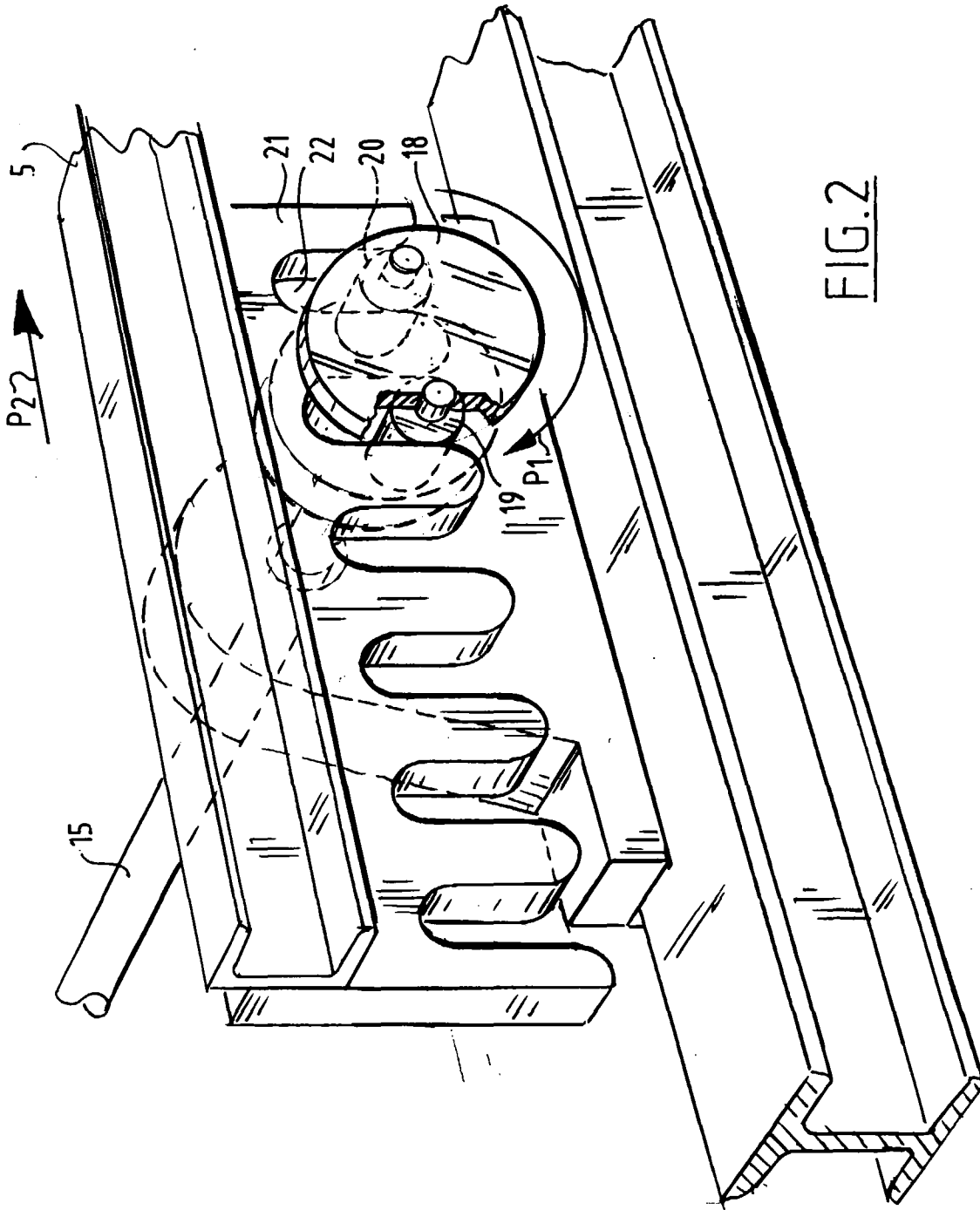


FIG. 2



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EUROPEAN SEARCH REPORT

Application Number  
EP 97 20 3444

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	GB 2 296 214 A (BOER BEHEER NIJMEGEN BV DE) 26 June 1996 * the whole document * * page 2, line 14 - page 2, line 31 * ---	1,3,5-8	B28B13/02 B28B5/02
A	EP 0 706 866 A (BOER BEHEER NIJMEGEN BV DE) 17 April 1996 * the whole document * * column 2, line 28 - column 2, line 42 * -----	1-3,5-8	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B28B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		10 February 1998	Gourier, P
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