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(54) Method and device for height-adjustable arranging of masonry materials.

(57) The present invention relates to a method and a device for arranging raw materials for masonry, i.e. bricks 3 and mortar 4 at a place of work 1, wherein the height at which the raw material 3,4 are arranged is adjusted dependig on the progress of the masonry operation. The height-adjustable arranging device comprises a support part 2 and a lifting part 5 releasably connected thereto. When the support part 2 has been placed at a desired height, it can be fixed thereon, and the lifting part 5 can be released and used to carry another support part 2 to a desired height. Thus, fewer lifting parts 5 are needed than there are support parts 2 present.

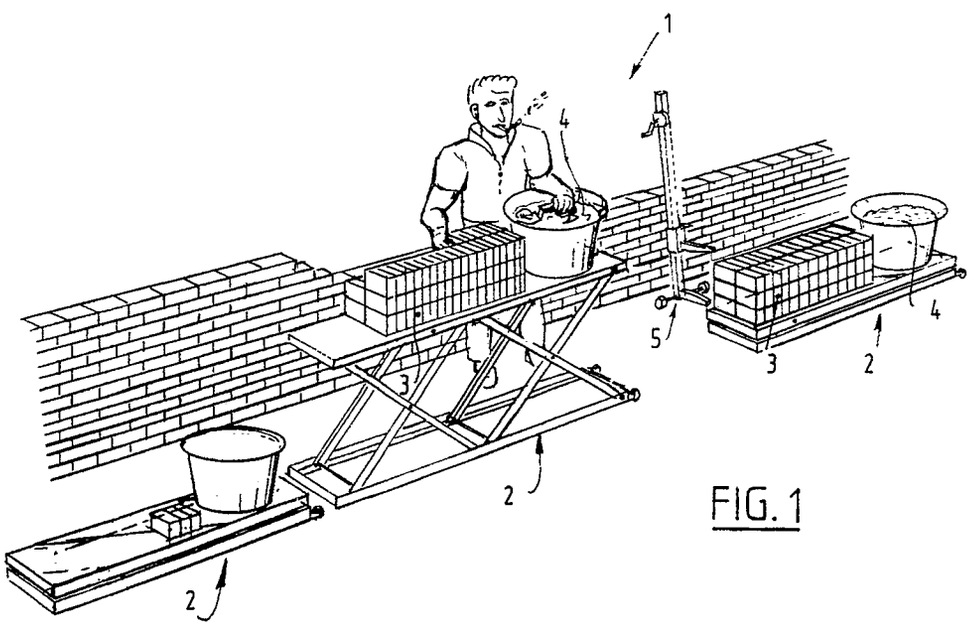

FIG. 1

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METHOD AND DEVICE FOR HEIGHT-ADJUSTABLE ARRANGING OF MASONRY MATERIALS

The invention relates to a method for arranging raw materials for masonry at a place of work, wherein the height at which the raw materials are arranged is adjusted depending on the progress of the masonry operation.

Such a method is known from the US Patent No. 2,988,165. The advantage of this method over the conventional masonry procedures is that the height difference between on the one hand the upper part of the masonry work in progress and on the other the diminishing supply of masonry materials can be kept virtually constant by adjusting the height at which the raw materials are arranged. Thus prevented is that the mason has to bend further and further down. The strain on the back of the mason and the number of back complaints resulting therefrom are thus limited, while the productivity of the mason is moreover increased.

In the performing of the above described method, however, the supply of masonry raw materials which is arranged on the work-site on a height-adjustable device has to be regularly replenished. During replenishing the masonry operations have to be interrupted, resulting in loss of time. This can be prevented by using multiple devices, but the method hereby becomes quite expensive.

The present invention therefore has for its object to provide a method of the above described type wherein the above mentioned drawbacks do not occur. This is achieved according to the invention in that for the arranging use is made of height-adjustable support parts and a lifting part for releasable connection to a support part for adjusting the desired height, that multiple support parts are present close to each place of work, that during masonry operations the lifting part is successively connected to different support parts, and that the support parts are fixed at the adjusted height. Because the lifting part is releasable from the support parts and the support parts can be fixed at a determined adjusted height, fewer lifting parts are needed than there are support parts present. This has a considerable cost-saving effect.

The invention further relates to a device for height-adjustable arranging of raw materials for masonry, comprising a support part and a lifting part.

Such a device is likewise known from the U.S. Patent No. 2,988,165.

Drawbacks of the device known from the said patent specification are however that it is of complex construction and therefore costly and susceptible to breakdown, while it is furthermore difficult to move.

The present invention therefore has for a further object to provide a device of the heretofore described type wherein the above stated drawbacks do not occur. This is achieved according to the invention in that the support part and the lifting part are releasably connected to one another.

When the support part has the form of a so-called scissor table a device is obtained that is simple and light of construction.

The scissor table preferably comprises at least two mutually connected scissor parts arranged at an interval from one another. The loads on the scissor table are hereby distributed whereby excessive deformation and jamming of the scissor parts are avoided.

When means are present for fixing the scissor parts in at least one predetermined position, the lifting part can also be detached when the scissor table is situated in the folded-out position. The device can thus be used with fewer lifting parts than there are support parts present, which has a considerable cost-saving effect.

The scissor table preferably has a base and the fixation means comprise fixation hooks connected to the scissor parts and co-acting with fixation pins attached to the base.

When the lifting part comprises a frame releasably connected to the base and a lifting member arranged movably on the frame and connected releasably to the top of the scissor table, and the frame further has a chain winch mechanism and the lifting member comprises a toothing releasably connected to the chain, the lifting member can be rapidly set at the correct height prior to connection to the table top.

Mentioned and other features of the method and device according to the invention are described hereinafter on the basis of an embodiment wherein reference is made to the annexed drawings in which corresponding components are designated with corresponding reference numerals, and wherein:

fig. 1 shows a perspective view of the method according to the invention;

fig. 2 is a partially cut away, perspective view of the device according to the invention;

fig. 3 is a perspective view of the support part of a device according to the invention in collapsed state;

fig. 4 shows a side view of the support part of the device according to the invention in different positions; and

fig. 5 shows a partially cut away detail view of the lifting part of the device according to the invention.

Present at a place of work 1 (fig. 1) are various height-adjustable support parts 2 for arranging raw

materials for masonry work, namely bricks 3 and mortar 4. Further present at the place of work 1 is a lifting part 5 which can be releasably connected to a support part 2 in order to carry the support part 2 to the desired height. When a support part 2 has been placed at the desired height it can be fixed thereon.

A mason works with bricks 3 and mortar 4 from one of the support parts 2 at a time. The remaining support parts 2 not in use are meanwhile filled by a so-called hod-carrier with bricks 3 and mortar 4 and carried using the lifting part 5 to the desired height.

The support part 2 has the form of a scissor table (fig. 2) with a base 6, two scissor parts 7 arranged at an interval from one another and a table top 8. The scissor parts 7 are mutually connected by connecting means 9. The support part 2 is further provided with means for fixing the scissor parts 7 in a number of positions consisting of a number of fixation pins 13 attached at an interval from one another to the base 6 and two fixation hooks 14 connected mutually and to the scissor parts 7. A line 15 enables disengaging of the fixation hooks from the fixation pins 13. The form of the fixation hooks 14 is such that they cannot be disengaged when the top 8 of the scissor table is loaded.

In order to enable simple transport of the scissor table tow wheels 10 are arranged on the base 6 and the table top 8 is provided with a hand-grip 11. In order to further facilitate handling of the scissor table the base 6 is also provided with a foot support 12.

The lifting part 5 comprises a frame 16 connected releasably to the base 6 and a lifting member 17 arranged movably on the frame 16 and for releasable connection to the top 8 of the scissor table. Both the frame 16 and the lifting member 17 are L-shaped. Their lying parts 18, 19 can be placed in engagement with tubular profiles of the scissor table respectively forming a part of the base 6 and of the top 8. The lying part 19 of the lifting member 17 forms a small angle with the surface of the top 8 in order to transfer the loads acting on the support part 2 uniformly onto the lifting part 5. The frame 16 has a chain winch mechanism 20 and the lifting member 17 comprises a toothing 22 (not shown here) for releasable connection to the chain 21 of the mechanism 20, which toothing can be placed in or out of engagement with the chain 21 by means of the control member 23.

Fig. 3 shows the support part 2 in collapsed state.

The scissor table 2 has a number of folded-out positions (fig. 4), which are determined by the position of the fixation pins 13 on the base 6. The folded-out positions of the scissor table are selected such that they each correspond with an optimum working posture for a mason. Suitable heights of the table top 8 above the ground are for instance 65 cm, 45 cm, 30 cm and 12 cm.

In order to be able to place the lifting member 17 rapidly in a position relative to the frame 16 wherein its lying part 19 (not shown here) can be connected to the folded-out working surface 8 the toothing 22 can be temporarily taken out of engagement with the chain 21 by turning a control member 23.

Claims

1. Method for arranging raw materials for masonry at a place of work, wherein the height at which the raw materials are arranged is adjusted depending on the progress of the masonry operation, **characterized in that** for said arranging use is made of height-adjustable support parts (2) and a lifting part (5) for releasable connection to a support part (2) for adjusting the desired height, that multiple support parts (2) are present close to each place of work (1), that during masonry operations the lifting part (5) is successively connected to different support parts (2), and that the support parts (2) are fixed at the adjusted height.

2. Device for height-adjustable arranging of raw materials for masonry, comprising a support part and a lifting part, **characterized in that** the support part (2) and the lifting part (5) are releasably connected to one another.

3. Device as claimed in claim 2, **characterized in that** the support part (2) has the form of a so-called scissor table.

4. Device as claimed in claim 3, **characterized in that** the scissor table comprises at least two mutually connected scissor parts (7) arranged at an interval from one another.

5. Device as claimed in claim 4, **characterized by** means for fixing the scissor parts in at least one predetermined position.

6. Device as claimed in claim 5, **characterized in that** the scissor table has a base (6) and the fixation means comprise fixation hooks (14) connected to the scissor parts (7) and co-acting with fixation pins (13) attached to the base (6).

7. Device as claimed in claim 6, **characterized in that** the lifting part (5) comprises a frame (16) releasably connected to the base (6) and a lifting member (17) arranged movably on the frame (16) and connected releasably to the top (8) of the scissor table.

8. Device as claimed in claim 7, **characterized in that** the frame (16) has a chain winch mechanism (20) and the lifting member (17) comprises a tooth-

ing (22) releasably connected to the chain (21).

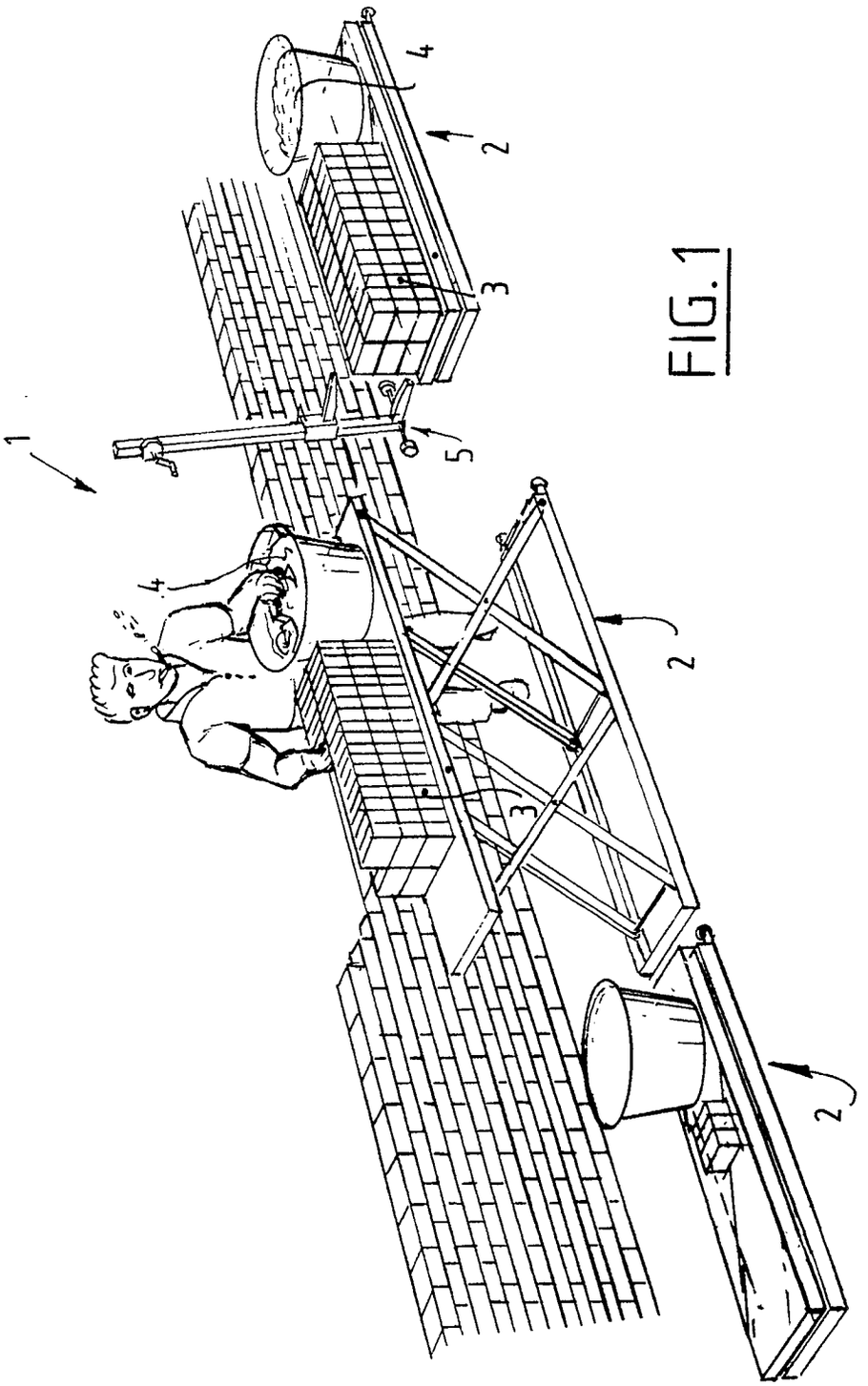

FIG.1

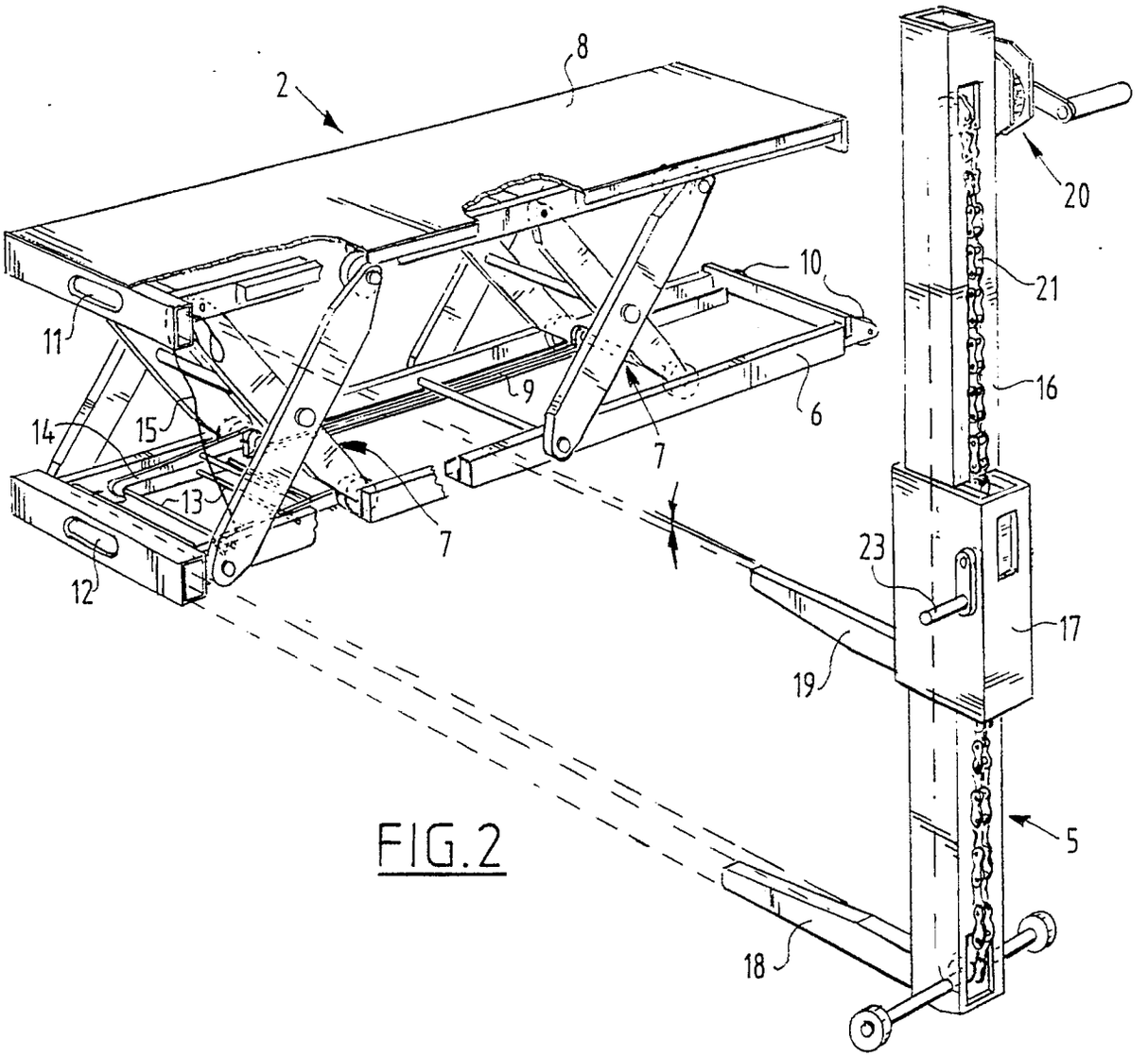

FIG.2

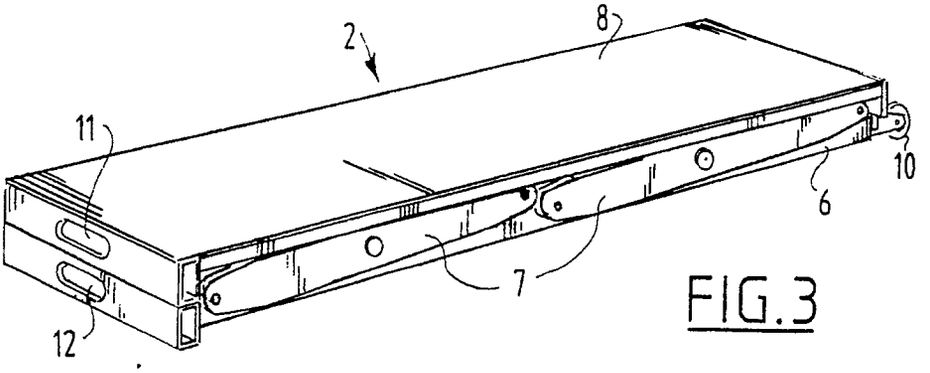

FIG.3

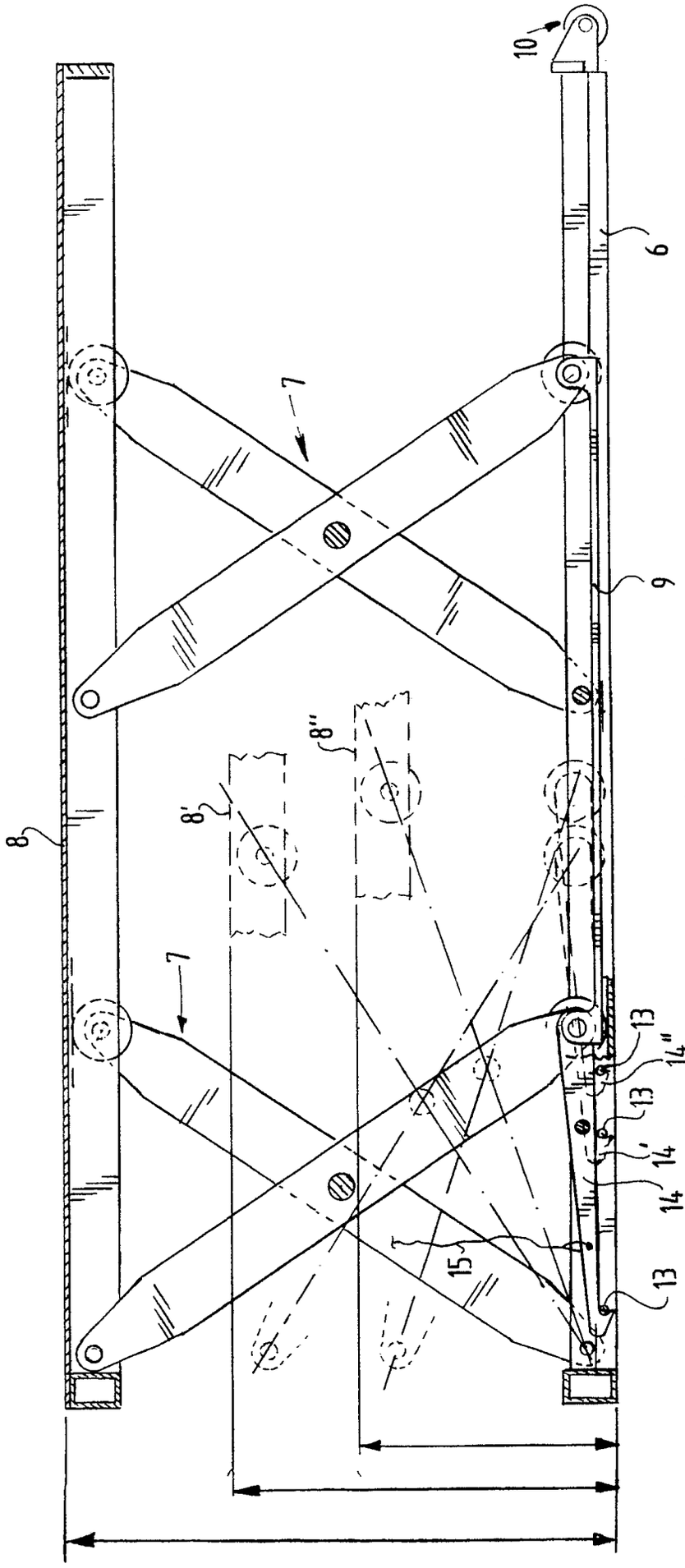

FIG.4

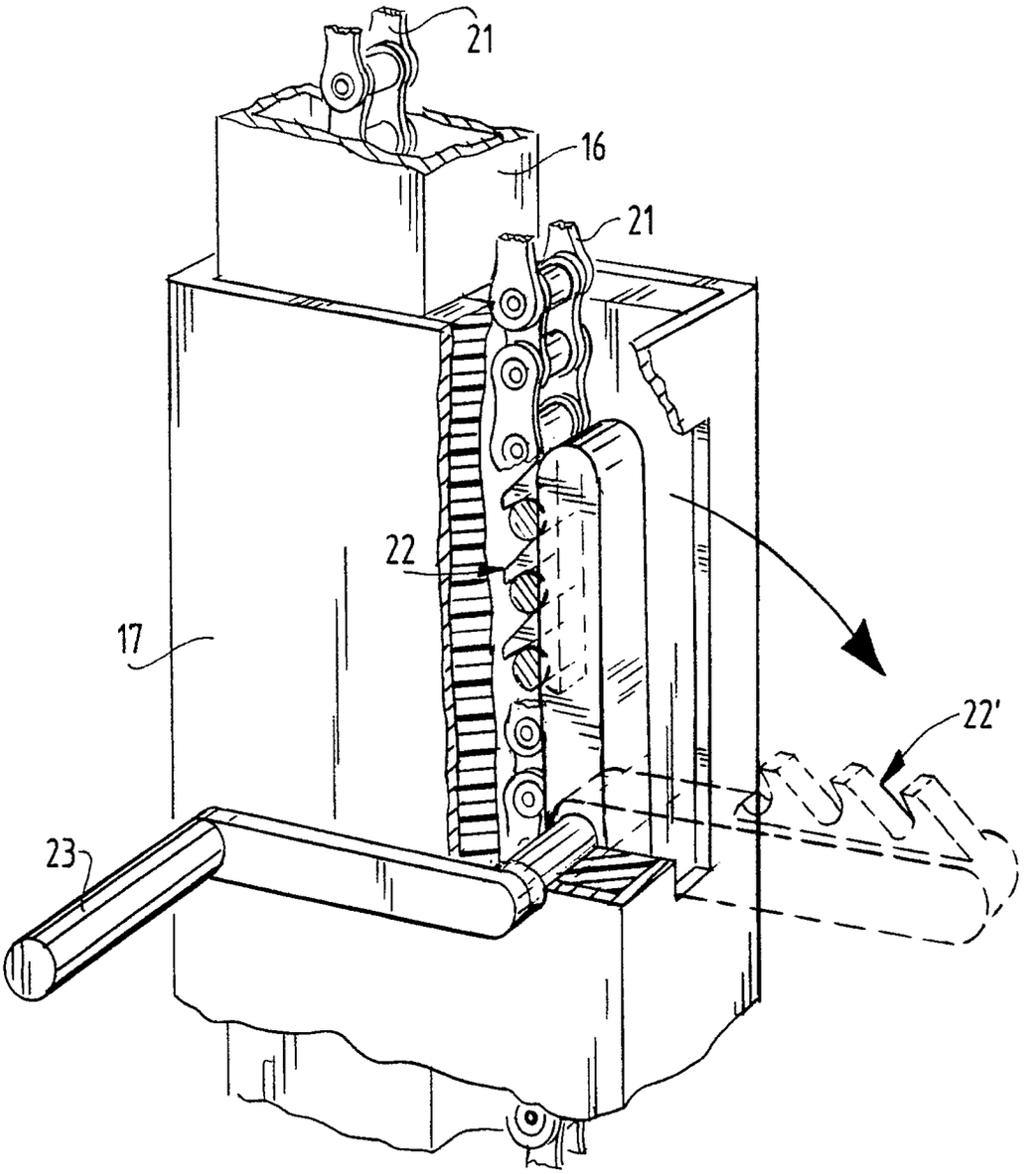

FIG.5

European Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 90 20 2001

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.5)
Y	BE-A- 893 592 (CALLENS) * Pages 1-2; figure A *	1,2,3	E 04 G 21/00 E 04 G 1/22
A	---	7	
Y	DE-B-1 127 563 (STEINBOCK) * Column 2, lines 37-52; columns 3-4; figures 1-6 *	1,2,3	
A	---	5,7	
A	CH-A- 131 433 (BILAND-LAUBI) * Pages 1-2; figures 1-5 *	4	

TECHNICAL FIELDS SEARCHED (Int. Cl.5)

E 04 G
B 66 F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	17-10-1990	VIJVERMAN W.C.

CATEGORY OF CITED DOCUMENTS

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