Nov. 11, 1924. 1,514,631

G. H. A. RUBY

PLASTER BLOCK SCARFING DEVICE

Filed March 24, 1924 2 Sheets-Sheet 1

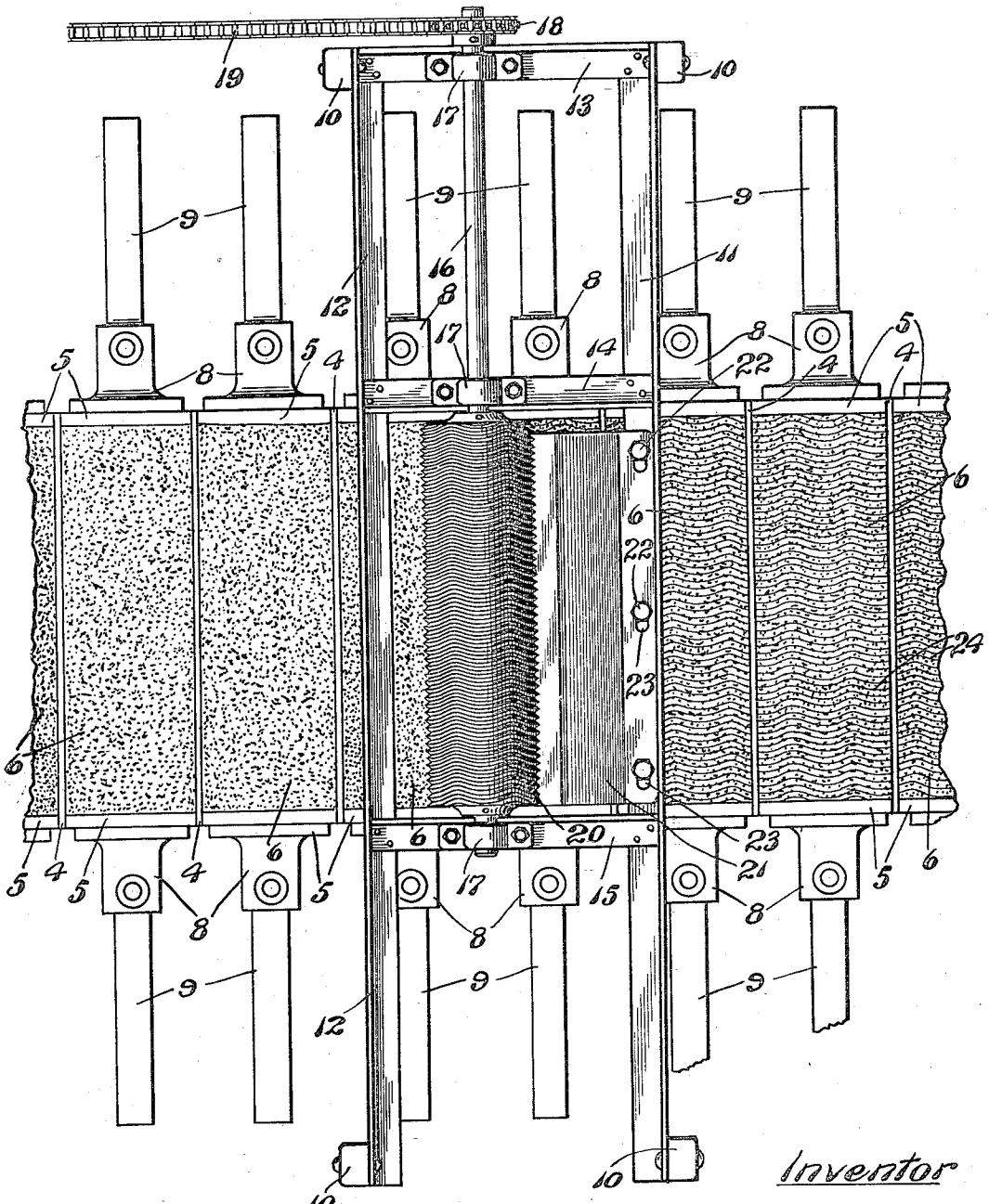


Fig. 1.

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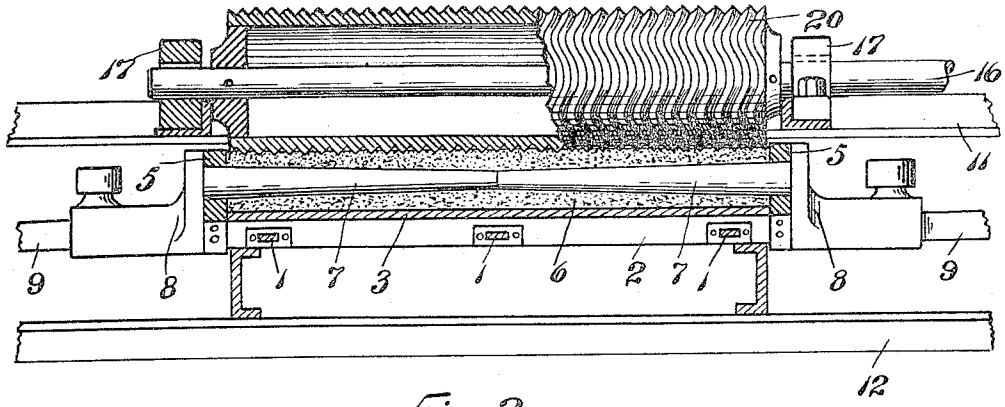


Fig. 2.

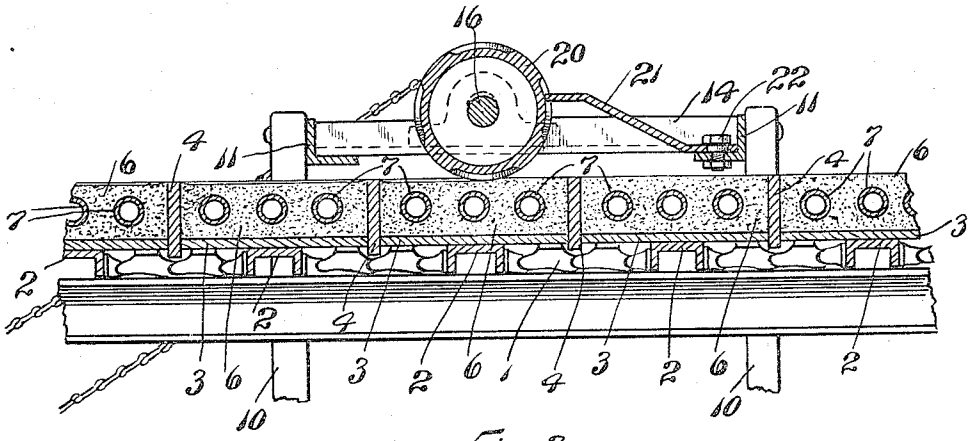


Fig. 3.

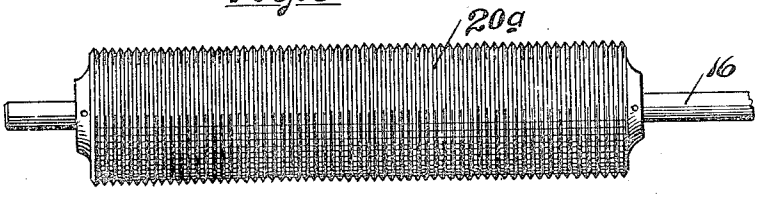


Fig. 4.

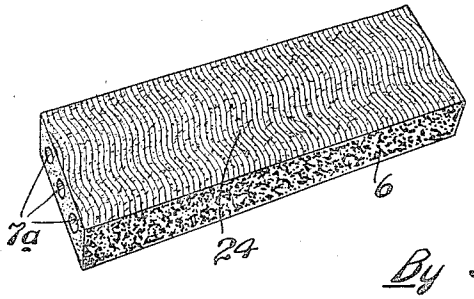


Fig. 5.

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UNITED STATES PATENT OFFICE.

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PLASTER-BLOCK SCARFING DEVICE.

Application filed March 24, 1924. Serial No. 701,351.

To all whom it may concern:

Be it known that I, GEORGE H. A. RUBY, a citizen of the United States of America, residing at Fort Dodge, in the county of Webster and State of Iowa, have invented certain new and useful Improvements in Plaster-Block Scarfing Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a scarfing device for use with plaster blocks or other similar blocks made from cementitious material, being used to roughen or scarf an exposed side of each block while the material thereof is still in a plastic state so that plastering may be done against the blocks when used in interior partition work in buildings, the plaster adhering and making a better connection thereto than if the blocks are smooth.

The present invention is designed to be used with machines for making plaster blocks wherein a continuously moving conveyer carries a large number of block forms having one open side into which the cementitious material is introduced into the forms. And it is an object and purpose of the present invention to make a device of this character which is simple, comprises few parts not liable to get out of order, and which is particularly practical and effective for the purposes for which it is designed.

For an understanding of the invention by means of which these ends are attained, reference may be had to the following description, taken in connection with the accompanying drawings, in which,

Fig. 1 is a fragmentary plan view of a block machine and showing the scarfing device of the invention applied thereto, said device being shown in plan.

Fig. 2 is a fragmentary vertical transverse section through the block machine, the scarfing roller being shown partly in section and partly in elevation.

Fig. 3 is a fragmentary vertical longitudinal section through the block machine, the scarfing mechanism being shown in vertical section transversely thereof.

Fig. 4 is an elevation of a slightly different form of scarfing roller from that shown in Figs. 1 and 2, and

Fig. 5 is a perspective view of the block after it is completed and scarfed by the scarfing device of this invention.

Like reference characters refer to like parts in the different figures of the drawings.

As shown in the drawings, a plurality of block forms are carried on conveyer chains indicated at 1, with interposed cross bars 2 of channel form connecting the chains, the bottoms 3 of the forms being permanently secured to the said bars 2. The forms lie side by side with vertical cross division plates 4 between them and are completed by ends 5 whereby individual block forms are made in each of which a block 6 may be made from cementitious material. As blocks made from plaster stucco material, in order to save material, are made with longitudinal openings therethrough, the machine is provided with a number of cores 7 for each block form which are attached to a common head 8 slidably mounted on guides 9, as shown, the cores 7 extending through each end of each block form and meeting at the mid-portion of the form. This construction is old and well known and is fully disclosed in a patent heretofore granted on an application by me and need not be further specifically outlined. It is sufficient to say that the conveyer moves continuously in one direction and the forms receive cementitious material in a wet and plastic state and are designed to hold the blocks sufficiently long that the same may become set and hardened.

The material for the blocks is put into the forms on the upper run of the conveyer and the upper sides of the blocks are left exposed. It is this side of each block that is to be acted upon by the scarfing device which I have applied to the block machine.

In the construction of the device, a pair of spaced apart vertical posts 10 are secured at each side of the machine and connected together to make a rigid frame work through bars 11 and 12 connecting posts on opposite sides of the machine, and connecting bars 13, 14 and 15 connecting the upper bars 11, as shown in Figs. 1 and 2. The bar 13 is at one end of the bars 11, while bars 14 and 15 are located substan-

tially above the ends of the block forms. A shaft 16 is rotatably mounted in suitable bearings 17 carried on the bars 13, 14 and 15. At its outer end it may be equipped with a sprocket wheel 18 for driving by a chain 19 from any suitable source of power.

On the shaft 16 between the bearings 17 a scarfing roller 20 is secured. This roller lies directly over the block forms and the same is grooved, as shown. The grooves may be as shown in the roller 20^a in Fig. 4 where the same run straight around the roller, or may be zig-zag grooves of the character shown in Figs. 1 and 2. In either case the roller is mounted to come into contact engagement with the exposed upper faces of the blocks carried in the forms so that when the said blocks pass under the roller, the upper exposed surfaces thereof are grooved transversely of the lengths of the blocks, the grooves being either straight or zig-zag dependent upon the type of scarfing roller used. It is evident that as the blocks pass under the roller, there is a tendency for the frictional engagement of the blocks and rollers to turn the roller, and this frictional engagement may be sufficient to operate the roller without auxiliary driving means such as shown in Fig. 1, at 18 and 19. The invention comprehends either manner of operation.

A scraper plate 21 is connected, by means of bolts 22 passing through short slots 23 in the plate, to a bar 11 and has its free edge notched so as to fit the grooves and ridges of the roller 20 to serve as a scraper to remove any of the cementitious material which may stick to the roller. Where a roller grooved with straight grooves, as shown in Fig. 4, is used, it is not necessary to provide the slots 23 in the plate, these being provided only with the zig-zag grooves to permit the limited longitudinal movement of the plate necessary so that its notched or serrated edge may follow said grooves.

It is apparent that with a construction of this character, the exposed side of each block is scarfed so that a surface is made to which plaster will adhere. This scarfed surface is indicated at 24 as made with the roller 20. If roller 20^a is used the effect is the same though the character of the grooves made is slightly different. This construction is particularly simple and practical and has proved its value in practice. The appended claims define the invention and all constructions coming within the scope of said claims are to be considered as comprehended by the invention.

I claim:

1. In combination, a block machine including a conveyer movable in a given direction and individual block forms carried by the conveyer having an open upper side for the entrance of cementitious material thereinto, and a grooved roller mounted to engage with the exposed upper surfaces of the blocks made in said forms from said material to scarf the same as the conveyer, forms and blocks pass under the roller.

2. In combination, a block machine including a conveyer mounted for movement and individual block forms carried by the conveyer having open upper sides for the passage of cementitious material thereinto, and a grooved roller mounted with the axis thereof parallel to the length of the forms and adapted to engage with the exposed upper surfaces of the blocks while in a plastic state in said forms to thereby scarf the same transversely as the conveyer, forms and blocks therein pass under the roller.

3. In combination, a block machine including a conveyer movable longitudinally in one direction and carrying a plurality of individual block forms located side by side located across the machine, and a grooved roller rotatably mounted above the forms, said forms having open upper sides for the entrance of cementitious material thereinto, and said roller turning as the conveyer, forms and blocks therein are moved under the roller, said roller engaging against the upper exposed surfaces of the blocks and thereby scarfing the same.

4. In combination with a movable conveyer, block forms carried thereby into which cementitious material is designed to be put, and means for acting against the upper exposed surfaces of blocks in said forms to scarf the same and alternately provide grooves and ridges therein across the same, substantially as described.

5. In combination with a movable conveyer, block forms carried thereby having open upper sides for entrance of cementitious material thereinto, posts located each side of the machine, bars connecting opposed posts, cross bars connecting the uppermost of said first bars, a shaft located above the cross bars and rotatably mounted in bearings carried by said cross bars, and a grooved roller on the shaft directly above the forms and positioned so that its surface will engage with the upper exposed surfaces of blocks made of cementitious material located in said forms.

6. A construction containing the elements in combination defined in claim 5, combined with a sprocket wheel connected to the shaft, and a chain for driving the said sprocket wheel.

7. A construction containing the elements in combination defined in claim 1 combined with means for driving the roller continuously, substantially as described.

8. In a machine of the class described, means for moving blocks of cementitious material continuously by a given point, and a grooved roller located over the blocks and

engaging with the upper surfaces thereof to scarf said surfaces.

9. In combination, a block machine including a conveyer movable in a given direction and individual block forms carried by the conveyer having open upper sides for the entrance of cementitious material thereinto, and a roller rotatably mounted above the said forms and formed with alternate grooves and ridges around the same to engage with the exposed upper surfaces of the blocks made in said forms, substantially as and for the purposes described.

10. In combination, a block machine including a conveyer movable in a given direction and individual block forms carried on and transversely of the conveyer having open upper sides for the entrance of cementitious material thereinto, and a roller formed at its outer surface with alternate zig-zag grooves and ridges rotatably mounted to engage with the exposed surfaces of blocks in said forms, substantially as described.

11. A construction containing the elements in combination defined in claim 9, combined with a scraper plate mounted adjacent the roller and having one edge serrated to conform with the grooves and ridges in the roller, said edge lying closely adjacent to the roller, substantially as described.

12. A construction containing the elements in combination defined in claim 10, combined with a scraper plate formed with one edge serrated to conform to the grooves and ridges in the roller, and means for mounting the plate adjacent its other edge for limited longitudinal movement whereby the plate may follow the zig-zag shape of the said grooves and ridges in the roller.

In testimony whereof I affix my signature.

GEORGE HENRY ADAM RUBY.