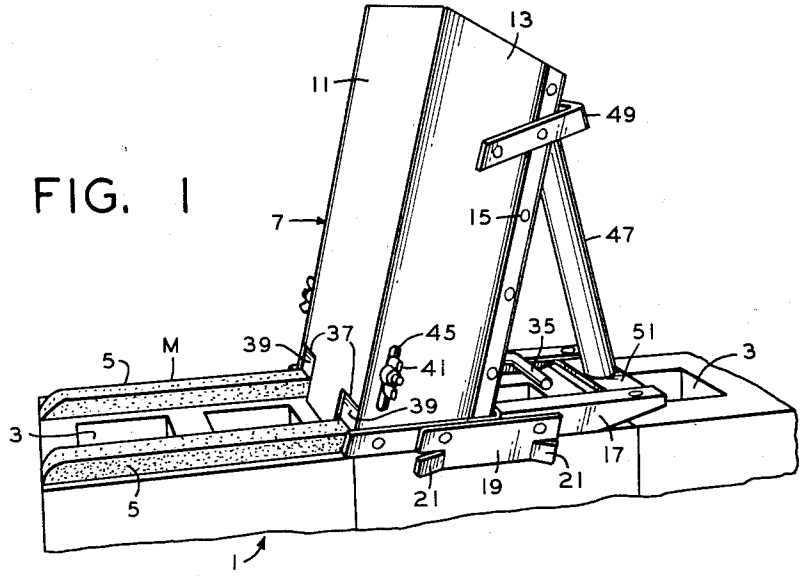
Sept. 1, 1964 W. G. NEGWER 3,146,509

MORTAR LAYING DEVICE

Filed Sept. 8, 1961 2 Sheets-Sheet 1

FIG. 1



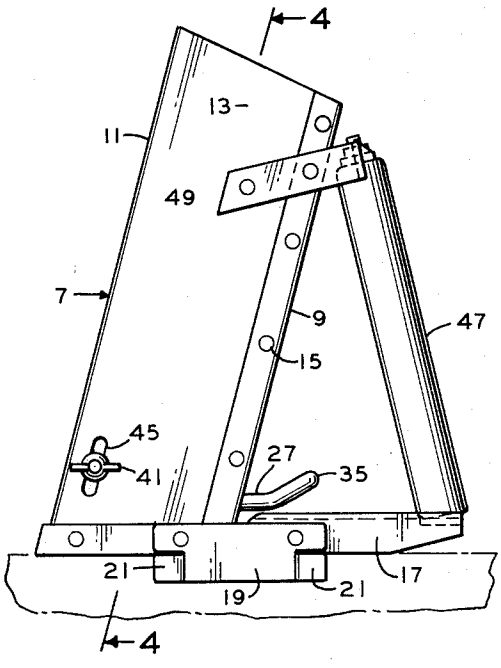


FIG. 2

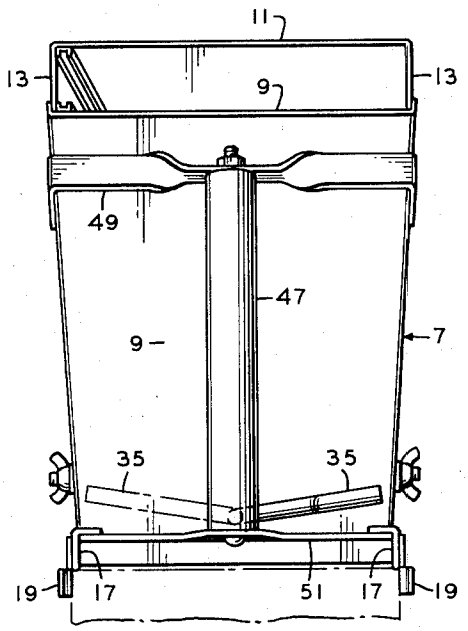


FIG. 3

Walter G. Negwer,
Inventor.
Koenig, Pope, Senniger and Bowers,
Attorneys.

Sept. 1, 1964 W. G. NEGWER 3,146,509

MORTAR LAYING DEVICE

Filed Sept. 8, 1961 2 Sheets-Sheet 2

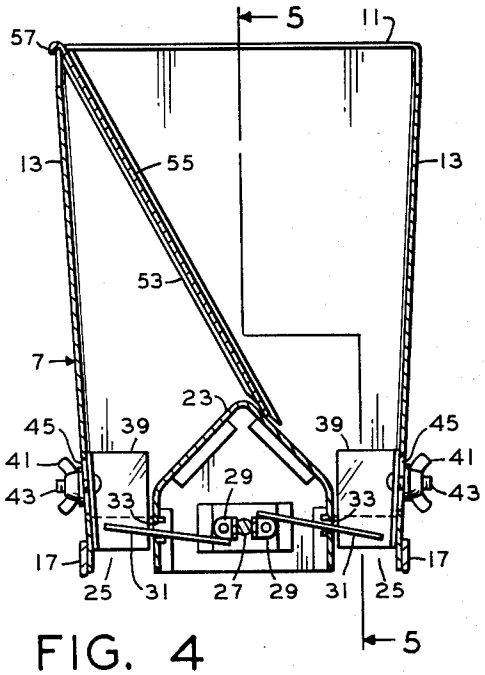


FIG. 4

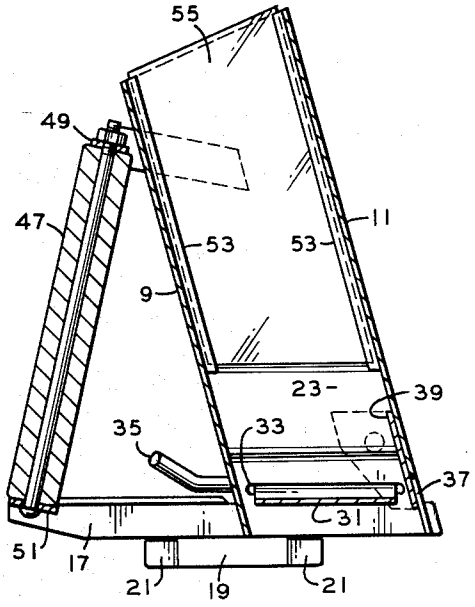


FIG. 5

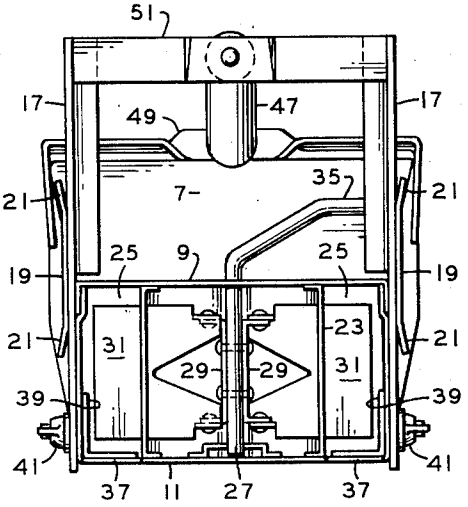


FIG. 6

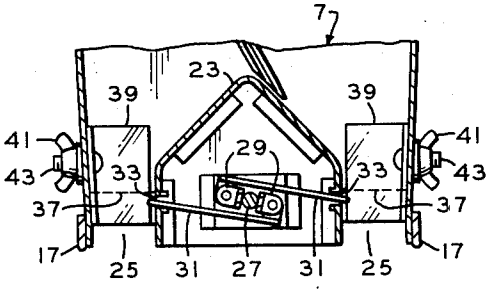


FIG. 7

Walter G. Negwer,
Inventor.
Koenig, Pope, Senniger and Powers,
Attorneys.

United States Patent Office 3,146,509 Patented Sept. 1, 1964

3,146,509

MORTAR LAYING DEVICE

Walter G. Negwer, Ferguson, Mo.
(38 Blackburn Ave., St. Louis, Mo.)

Filed Sept. 8, 1961, Ser. No. 136,941
2 Claims. (Cl. 25—118)

This invention relates to a device for laying mortar or like, and more particularly to a device for laying stripes of mortar along opposite edges of the upper surfaces of construction blocks and the like.

Among the several objects of this invention may be noted the provision of a mortar laying device with which mortar may be scooped out of a mortar supply, and applied along the longitudinal edges of the top faces of construction blocks; the provision of such a mortar laying device adapted to prevent mortar from running out the bottom thereof when mortar is scooped up by the device and adapted to effect flow of mortar out through the bottom of the device in two stripes of predetermined depths when the device is placed upon and moved along the construction blocks; the provision of a mortar laying device of the class described with which the thickness of the mortar stripes may be conveniently controlled; the provision of such a device which can be modified to lay one stripe of mortar, such as would be desirable on an end edge of a construction block; and the provision of a device of this class which is simple and economical in construction. Other objects and features will be in part apparent and in part pointed out hereinafter.

The invention accordingly comprises the constructions hereinafter described, the scope of the invention being indicated in the following claims.

In the accompanying drawings, in which one of various possible embodiments of the invention is illustrated,

FIG. 1 is a trimetric view of a mortar laying device made according to the invention showing the application of mortar to a row of hollow construction blocks;

FIG. 2 is a side view in elevation of the invention;

FIG. 3 is a front view in elevation of the device;

FIG. 4 is an oblique section taken on line 4—4 of FIG. 2;

FIG. 5 is a section taken on line 5—5 of FIG. 4, showing a triangular relationship bteween certain handle, scoop and guide means;

FIG. 6 is a bottom view of the device; and

FIG. 7 is a fragmentary section generally similar to FIG. 4 but showing certain movable parts in alternative positions.

Corresponding reference characters indicate corresponding parts throughout the several views of the drawings.

Referring to FIG. 1 of the drawings, a wall-forming row of construction blocks of a well known type is generally indicated at **1**. The blocks are conventionally cast with holes **3**. Mortar M is applied to the blocks in two stripes **5**, one stripe along each longitudinal edge of the upper surfaces of the blocks.

The mortar laying device of this invention comprises a scoop or hopper **7** which has a front wall **9**, rear wall **11**, and side walls **13**. For ease of assembly, the scoop **7** may be constructed of sheet metal with a first channel-shaped piece comprising side walls **13** and back wall **11**, and a second channel-shaped piece comprising front wall **9**. As shown, front wall **9** is attached to side walls **13** by rivets **15**.

Attached to the lower edge of each side wall **13** is an elongate runner **17**. A lateral guide plate **19** is attached to each runner **17** and extends below the side walls **13**. Runners **17** and guide plates **19** guide the device along the construction blocks, the runners **17** riding on the outside margins of the upper faces of the blocks and

the guide plates **19** slidably engaging the upper margins of the sides of the blocks. Each guide plate **19** is provided with struck-out portions **21** for facilitating sliding.

An inverted V-shaped deflector **23** extends between and is attached to the front and rear walls **9** and **11** near the bottom of the scoop **7**. The deflector **23** and the walls of the scoop **7** cooperate to form openings **25** adjacent the side walls **13** at the bottom of the scoop. Mortar within the scoop **7** is directed by deflector **23** toward side walls **13** and openings **25**.

Rotatably mounted in the front and rear walls **9** and **11** is a shaft **27**. A pair of brackets **29** is attached to shaft **27**, the brackets being on opposite sides of the shaft. A blocking plate **31** is pivotally connected to each bracket **29** and extends outwardly toward a side wall **13** through a horizontal slot **33** in the deflector **23**.

An arm **35** is connected to shaft **27** outside of wall **9** to form a handle for rotating the shaft. As shown, arm **35** is an extension of the shaft. Movement of the outer end of arm **35** away from the left side **13** toward the right side **13** as viewed in FIG. 3 causes the shaft **27** and blocking plates **31** to move from a first position wherein the plates **31** are drawn within the deflector **23** and mortar is permitted to flow through openings **25**, to a second position wherein the plates **31** extend out through slots **33** toward side walls **13** and mortar is substantially blocked against passing through openings **25**. The consistency and viscosity of mortar is such that very little, if any, will flow through the clearance spaces between the plates **31** and the scoop walls when the plates are extended.

Openings **37** are provided in the lower outside corners of the rear wall **11** for forming the stripes **5** of mortar. Two L-shaped plates **39** are mounted for movement down across openings **37**. They may be locked in place by wing nuts **41** and screws **43** in side wall slots **45**. By adjusting the plates **39** up or down the thicknesses of the stripes **5** may be controlled.

A handle **47** is connected to the scoop **7** by an upper bracket **49** attached to side walls **13** and a lower bracket **51** attached to the forward end of runners **17**.

Assuming that it is desirable to provide two stripes of mortar on a row of construction blocks, such as shown in FIG. 1, operation of the device of this invention is as follows:

The openings **25** are substantially closed by moving arm **35** to its solid line position in FIG. 3, thereby moving plates **31** toward the side walls **13**. The plates **39** may be adjusted to produce stripes of the desired thickness by releasing the wing nuts **41** and moving members **39** by sliding bolts **43** in their slots **45**. The person laying the mortar grasps the handle **49** and utilizes the scoop **7** to scoop up mortar from a supply thereof. The device is then positioned on a block with the runners **17** located on the upper outside edges of the block and the guide plates **19** located adjacent the sides of the block. Arm **35** is then moved to its broken line position in FIG. 3, thereby drawing the plates away from the side walls and permitting mortar to flow through the openings. The device is then pulled along the blocks, leaving two stripes of mortar on the upper outside margins of the blocks. At the end of a row the operator merely moves arm **35** back to its solid line position in FIG. 3, thereby closing the openings **25** and shutting off the flow of mortar.

At times, it may be desirable to lay only one stripe of mortar along one side edge of a block or row of blocks. For example, a single stripe of mortar might be laid upon the upper edge of a block. For this purpose a pair of channels **53** is provided on the inside of scoop **7**, one channel being attached to the front wall **9** and the other channel being attached to rear wall **11**. The channels **53**

extend from the upper left hand corner of the scoop as viewed in FIG. 4 downward toward deflector **23**. A plate **55** is arranged to be slideably received in the channels. A stop-off lip **57** on the upper end of plate **55** engages the left hand side wall **13** and prevents the plate from sliding too far down deflector **23**. With the plate in position any mortar scooped up by scoop **7** will be directed down toward right hand opening **25** as viewed in FIG. 4. Thus the device may readily be converted into a one-stripe mortar layer.

In view of the above, it will be seen that the several objects of the invention are achieved and other advantageous results attained.

As various changes could be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I claim:

1. A portable device for laying stripes of mortar on wall margins, comprising a member having a handle and forming a portable scoop which is open at an upper end for manually scooping up mortar from a supply thereof, transverse means attached to the lower end of the scoop for guiding it along the wall when drawn along by said handle, the scoop, handle and guide means being in a triangular relationship such that the scoop slopes downward and rearward with respect to its movement when drawn forward by the handle along the wall, said scoop having transverse bottom openings for downward escape of mortar, said scoop also having rearward outlets for rearward escape of mortar, adjustable plate means at said outlets adapted to vary the depth of the mortar escaping through said outlets, a hollow protective divider member within the scoop forming inside walls of said bottom openings, each such wall including a passage, said divider member having an upper inverted V-shape adapted to divide the flow of mortar to said bottom openings, plates transversely slidable in said passages respectively and having their outer ends transversely movable across said bottom openings to control downward passage of mortar, the inner ends of said plates being movable under said hollow protective divider member, cranks under the protective divider member and coupled to the inner portions of the plates respectively, and a rotatable shaft connected to said cranks under the divider member for operating said plates in opposite directions, said shaft extending to the outside of the scoop adjacent the handle where it is provided with lever means for operating it to opposite positions wherein said plates substantially open and close said bottom openings.

2. A device according to claim 1, including a removable stop-off plate in the scoop adapted to restrict mortar flow to one bottom opening.

References Cited in the file of this patent

UNITED STATES PATENTS

885,951	Post	Apr. 28, 1908
1,594,775	Greslen	Aug. 3, 1926
1,756,518	McMillan	Apr. 29, 1930
2,341,691	Ciceske	Feb. 15, 1944
2,620,540	Weir	Dec. 9, 1952
2,789,336	Shealy	Apr. 23, 1957
3,002,249	Jackson	Oct. 3, 1961

FOREIGN PATENTS

19,611	Great Britain	Aug. 27, 1912