June 19, 1956 J. LAMM 2,750,789

TROWEL AND HOPPER

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Fig. 1

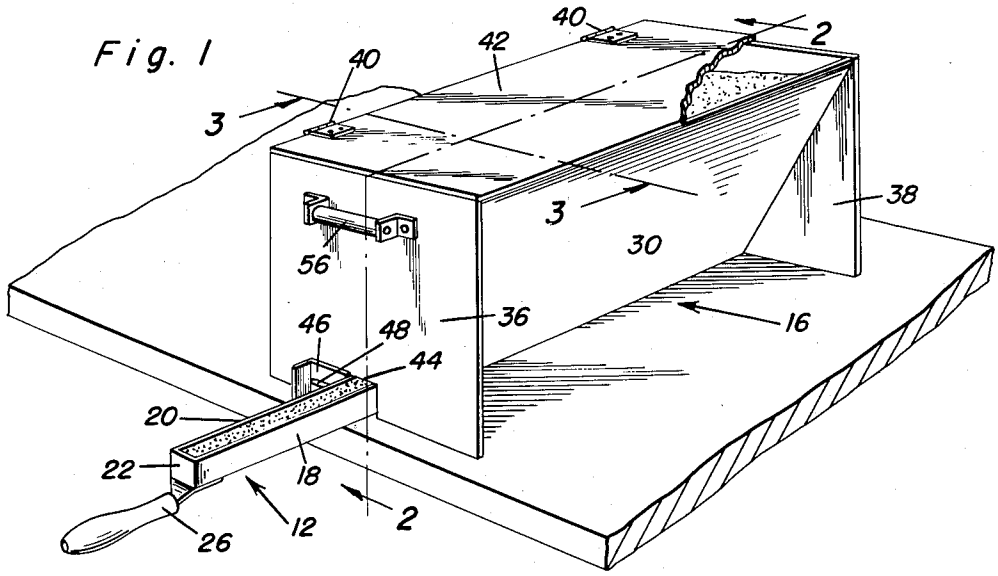


Fig. 2

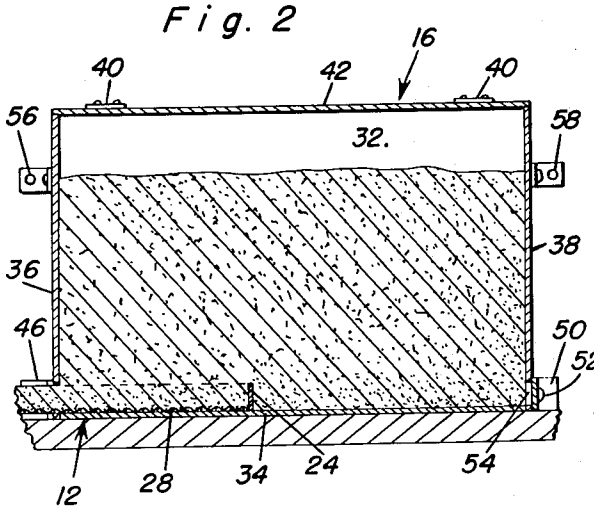
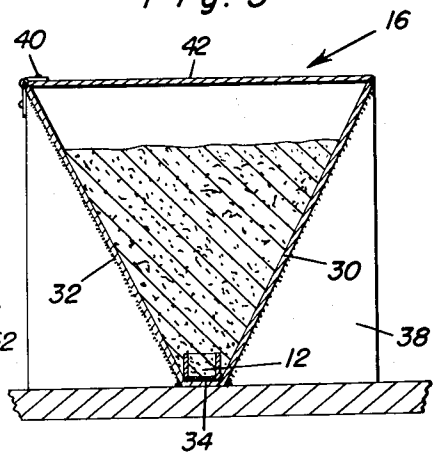


Fig. 3



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Fig. 4

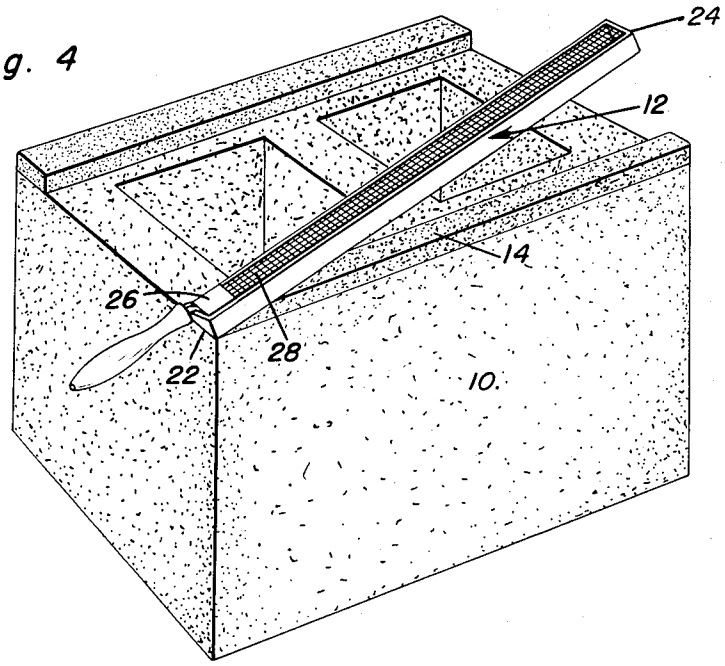


Fig. 5

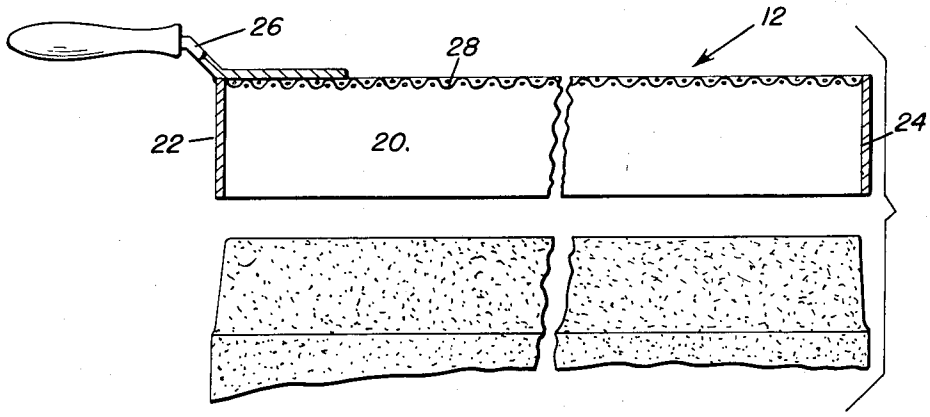
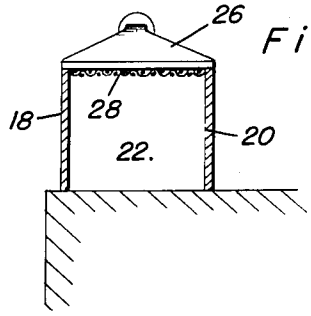


Fig. 6



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United States Patent Office 2,750,789 Patented June 19, 1956

2,750,789

TROWEL AND HOPPER

John Lamm, Kent, Ohio, assignor of one-half to Robert J. Lamm, Kent, Ohio

Application November 17, 1952, Serial No. 320,856

1 Claim. (Cl. 72—128)

This invention relates to a mortar spreading device and has for its particular object the provision of an apparatus that will insure the application of an even layer of mortar between building blocks and the like so as to aid even an unskilled workman to lay even courses of building blocks or bricks.

Another object of this invention resides in the provision of a novel hopper for use in conjunction with the trowel comprising another element of the invention, which hopper includes means for supplying mortar to the trowel in an entirely satisfactory condition, the hopper employing means for preventing the too rapid hardening of the mortar.

A further object of the invention resides in the provision of a hopper having means included therewith for adjusting or limiting the size of one or more openings therein so as to prevent the undue loss of mortar.

Still further objects of the invention reside in the provision of a mortar spreading device that is strong, durable, highly efficient in operation, simple in construction and manufacture, capable for use in laying a variety of types of building blocks and bricks, and which is relatively inexpensive to produce.

These, together with the various ancillary objects of the invention which will become apparent as the following description proceeds, are attained by this mortar spreading device, a preferred embodiment of which has been illustrated in the accompanying drawings, by way of example, wherein:

Figure 1 is a perspective view of the mortar spreading device comprising the present invention, showing the trowel in the process of being removed from the hopper after having been filled with mortar;

Figure 2 is a vertical sectional view as taken along the plane of line 2—2 in Figure 1 showing the interior construction of the hopper;

Figure 3 is another vertical sectional view as taken along the plane of line 3—3 in Figure 1, showing in particular the V-shaped construction of the side panels of the hopper;

Figure 4 is a perspective view showing the manner in which the trowel is used to provide an even ribbon of mortar on the surface of a building block;

Figure 5 is a sectional detail view showing the interior construction of the trowel as it is removed from the building block after depositing a ribbon of mortar thereon; and,

Figure 6 is a vertical sectional view as taken along the plane substantially perpendicular to the plane of Figure 5, showing schematically the position of the trowel relative to the edge of the building block.

With continuing reference to the accompanying drawings wherein like reference numerals designate similar parts throughout the various views, reference numeral **10** is used to generally designate a building block which may be of any desired size and which is adapted to be laid in courses while constructing a suitable building or the like. The trowel **12** is adapted to supply a ribbon of mortar such as indicated at **14** to the upper surface of the

building block **10**. Obviously the conformation of the trowel **12** determines the contours of the ribbon **14**. A hopper **16** is provided for metering mortar to the trowel **12**.

The trowel **12** includes a pair of elongated rectangular side walls **18** and **20** which are spaced from each other and which are either integrally formed with or are secured to spaced end walls **22** and **24**. Obviously the height of the side panels **18** and **20** and of the end panels **22** and **24** is predetermined by the desired height of the ribbon **14** of mortar. Secured to, by means of welding or any suitable connection, the top edges of the top panels **18** and **20** and the end panel **22**, is a handle **26** of conventional design such as is usually associated with mortar applying devices. A top panel formed of wire mesh as indicated at **28** or of a suitably perforated plate is secured to and extends between the top edges of the side walls **18** and **20** and the end walls **22** and **24**. This top member is provided with the perforations in order that the mortar will be more readily released from the trowel when such is positioned as shown in Figure 4.

The hopper **16** includes a pair of spaced downwardly converging side panels **30** and **32** which have secured to their bottom edges or integrally formed therewith a base panel **34**. End panels **36** and **38** are substantially rectangular in shape and extend between and beyond the side panels **30** and **32** to form supports for the hopper. By means of hinges **40**, a lid **42** is pivotally secured to the side panel **32** and is adapted to overlie the side panels **30** and **32** and the end panels **36** and **38** to reduce the speed of hardening of the mortar contained within the hopper **16**.

An aperture **44** is formed in the end panel **36** and a door **46** having a slot **48** therein is provided for adjustably limiting the size of the aperture **44**. The door **46** rides on a lug, not shown, which engages the door **46** within the slot **48**. The door **46** may readily be closed so as to prevent the oozing of the mortar from the opening when the hopper is not in use. It is entirely within the concept of the invention to provide a like aperture and door for the end panel **38** if such is desired. This door can be best seen in Figure 2 and is indicated by reference numeral **50**, and engages lug **52** so as to close aperture **54**. Carrying handles **56** and **58** are secured to the end panels **36** and **38** for transporting the hopper from one location to another.

In operation, the trowel **12** is inserted in one of the apertures **44** or **54** in an inverted position. The mortar then meters itself into the trowel. The trowel lies on the base **34** until it is withdrawn. Then, a substantially rectangular ribbon of precision thickness is withdrawn and then applied to the building block **10** or any other construction element by merely overturning the trowel as is shown in Figure 4.

Since from the foregoing, the construction and advantages of this mortar spreading device are readily apparent, further description is believed to be unnecessary.

However, since numerous modifications will readily occur to those skilled in the art after a consideration of the foregoing specification and accompanying drawings, it is not intended to limit the invention to the precise embodiment shown and described, but all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claim.

What is claimed as new is as follows:

A mortar device comprising a hopper having inclined downwardly converging side panels, a substantially rectangular base panel secured to and extending between the lowermost portions of said side panels, spaced end panels secured to and extending between said side panels, a lid hingedly mounted at the top of said hopper, one of said end panels having a rectangular aperture there-

through opening into the bottom edge thereof, an elongated rectangular mortar receptacle having a handle on an end thereof, said receptacle being slidably mounted in said opening and on said base panel, the top edges of said receptacle extending upwardly to a position immediately adjacent the peripheral edge portion of said one of said end panels defining the upper limit of said aperture so that said peripheral edge portion levels off mortar as said receptacle is withdrawn from said hopper, a screen forming the bottom of said receptacle to permit excess water to drain therethrough and whereby internal suction will be reduced when said receptacle is inverted to deposit mortar along an edge of a building block, and a horizontally slidable door on said one of said end walls to close said aperture when the mortar receptacle is withdrawn.

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