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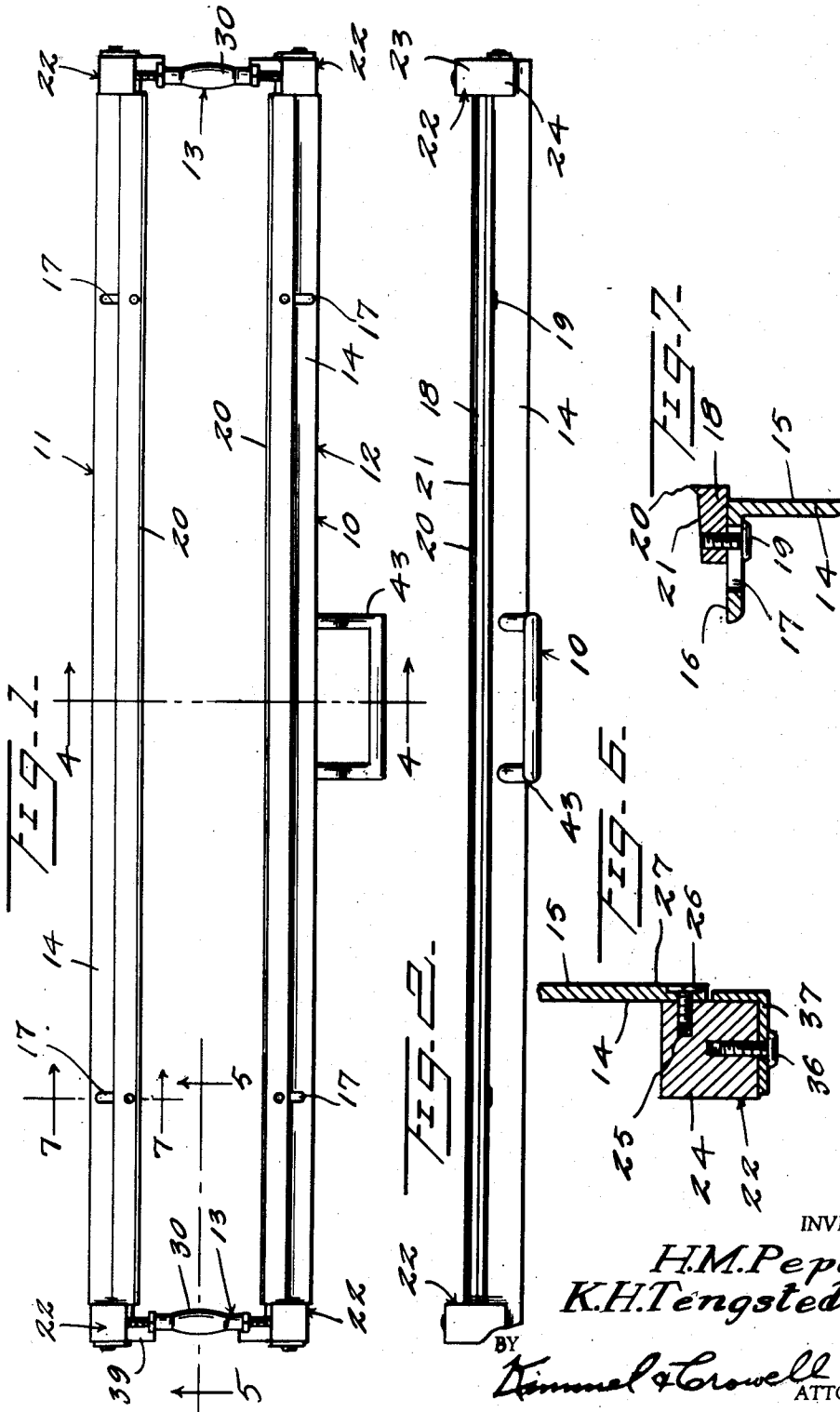
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MORTAR STRIP POSITIONING FRAME

Filed May 16, 1950

2 Sheets-Sheet 1



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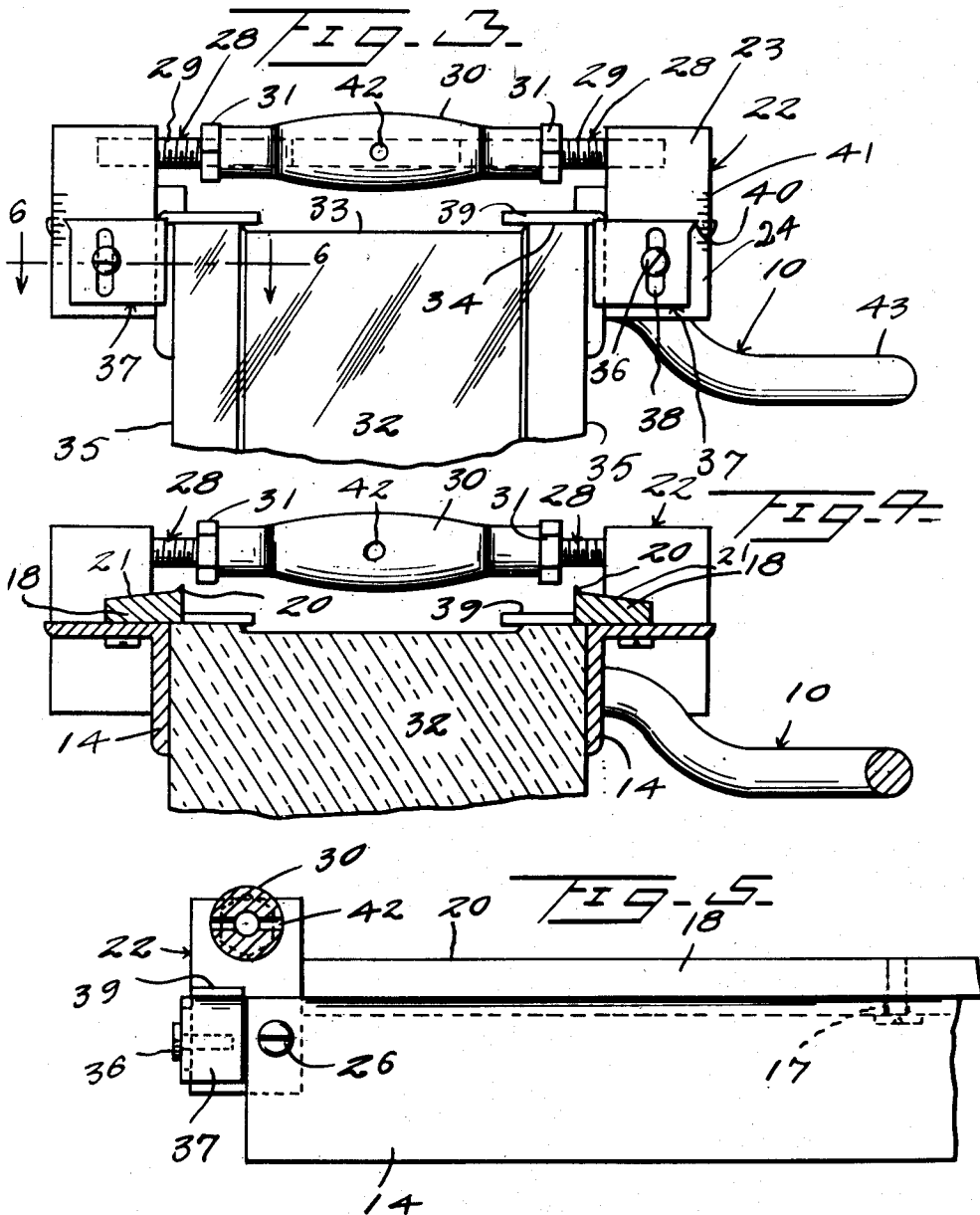
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MORTAR STRIP POSITIONING FRAME

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4 Claims. (Cl. 72-128)

1

The present invention relates to masonry implements and more particularly a device for controlling the amount and position of mortar applied to a course of masonry blocks.

In present day bricklaying especially in the laying of glass blocks, it has become highly desirable that the exact amount of mortar required to establish a bond between the blocks be placed on the successive courses of masonry. Such exact amount of mortar is necessary to provide what is termed as the "perfect" bond without undesired extrusion of excess mortar from between the blocks.

The extrusion of a mortar is highly undesirable in the forming of a wall of glass blocks due to the fact that the main reason for using glass blocks is to attain a structure that is especially pleasing in appearance and highly decorative. The use of excess mortar between the blocks is therefore highly undesirable for unless the mortar is immediately removed from the exposed or face portions of the block it is very difficult if not impossible of removal without injury to the blocks. On the other hand the use of insufficient mortar will not only cause a weak and faulty construction but may also develop what is known as a leaky wall caused by unfilled cavities and channels being formed between the blocks. In most instances the latter difficulty is due to the failure of the bricklayer to completely fill the "frog" or groove formed inwardly of the edges of the block with mortar during the laying operation. This lack of "filling" allows the mortar to develop pockets and suck-holes due to the tendency of the mortar to creep. It is apparent that such deficiencies are to be guarded against if a "perfect" bond between the masonry blocks, as they are laid with unmarred faces, is to be attained in a wall construction.

Therefore, it is the main object of this invention to provide a practical means for gauging and positioning a strip of mortar to the proper thickness and sufficiently back from the edges of the masonry blocks being laid to provide a complete bonding means therefor without developing undesired extrusions of mortar exteriorly of blocks joined by the mortar.

A further object is to provide a device capable of positioning a strip of mortar spaced from both sides of a masonry course at one operation.

A still further object is to provide a device capable of use in laying different sized building blocks.

Another object is to provide a device capable of being used from either side of a wall as found desirable.

2

Still another object is to provide a construction that is simple, rugged and yet sufficiently light of weight as to make it easy of manipulation by the bricklayer.

These and other objects will appear more fully as the description of the invention progresses in conjunction with the accompanying drawings wherein like numerals refer to like parts, and as defined in the appended claims.

In the drawings:

Figure 1 is a plan view of the present invention.

Figure 2 is a side elevational view.

Figure 3 is an end elevation showing the device in operative position on a course of glass blocks.

Figure 4 is a section taken on line 4-4 of Figure 1.

Figure 5 is a partial section taken on line 5-5 of Figure 1.

Figure 6 is a detail section taken on line 6-6 of Figure 3.

Figure 7 is a detail section taken on line 7-7 of Figure 1.

Referring now in detail to the drawings, in Figure 1 is shown a top view of the device of this invention designated generally by the numeral 10. The device 10 is formed as a rectangular frame of convenient length for handling by one man and has spaced side members 11 and 12 joined together at their ends by elevated handles 13 preferably formed as turnbuckles for adjustably spacing the side members therebetween. This adjustability of spacing allows for the frame to be adjusted for straddled positioning on masonry blocks of various thicknesses.

Each of the side members 11 and 12 is formed with an angle member 14 having a dependent inner vertical face 15 as best illustrated in Figure 7. Each vertical face 15 is disposed at right angles to a planar top portion 16 formed with a plurality of spaced slots as at 17 disposed intermediate of its opposite ends. Extending along the top 16 of each angle member 14 and attached thereto by suitable screw means 19 adjustably mounted in slots 17 is a strip 18 adapted for lateral adjustment relative to the face 15. Each of the strips 18 are formed with an upstanding straight edge 20 of limited area to provide a knife-like edge or upper surface spaced inwardly of a cutaway top portion 21. This arrangement of a straight edge 20 of limited surface area greatly assists the bricklayer using the device 10 to attain a smooth strip of mortar positioned between strips 18 by merely running his trowel along the straight edge as hereinafter explained. Such a sharp edge as 20 can be readily kept clean and free of accumu-

3

lated mortar deposits which might otherwise form an irregular trowel contacting surface. Both the angle members 14 and strips 18 are preferably formed of an aluminum alloy metal to attain lightness of weight and are dimensioned to provide the desired rigidity and strength in a construction subjected to comparatively rough usage.

Mounted at each end of the angle members 14 is a terminal block 22, making a total of four, preferably formed of a relatively strong alloy metal capable of being drilled and threaded to receive a number of inserted members. Each of the terminal blocks 22 is generally rectangular and of sufficient length as to provide one end 23 raised above the plane of the side members 11 and 12 with an opposite end 24 forming an extension of the angle members 14. The end 24 is formed with transversely drilled bore holes internally threaded as at 25 to receive a suitable screw or recessed bolt 26 inserted through apertures 27 formed in the ends of angle members 14 (Figure 6) extending inwardly of face 15. Although screw or bolt means are shown for securing the blocks 22 to the ends of the angle members 14 it will be apparent that in certain instances it may be found desirable to secure these parts together by other means such as welding or brazing.

Carried by each terminal block 22 and extending from the top portion 23 above and at right angles to the side members 11 and 12 is a fixed stud 28. This construction provides a pair of oppositely disposed aligned studs extending toward each other between oppositely disposed terminal blocks when positioned as aforescribed which are provided with ends 29 reversely threaded to threadedly receive a connecting turnbuckle or bridging handle 30 positioned at each end of the device 10. This arrangement of the studs 28 having oppositely disposed right and left threads matched with the threads of the turnbuckle 30 allows for changing the spacing of the facings 15 of the side members by merely turning said turnbuckles to contracted or expanded positions of the studs 28 as desired. The utility of such extensibility is readily apparent and enables the device 10 to be readily used in laying blocks of all the various standard sizes conventional in the masonry art. Each stud 28 has mounted thereon of a threaded lock nut 31 engageable with the turnbuckle 30 at its opposite ends to effect locking of the assembly at the desired spacing. Each of the turnbuckles 30 are provided with a transverse opening 42 formed therein and adapted to receive a pin or similar lever means to assist in turning the turnbuckle as desired and each turnbuckle may also be formed with a fluted or knurled surface for the same reason.

The spaced arrangement of side members 11 and 12 relative to a masonry course is best shown in Figures 3 and 4 which show the device 10 in operative position straddled over a masonry course composed of building blocks 32. It will be noted that glass blocks are indicated at 32 which are formed with a decided "frog" or grooved portion 33 extending laterally around each block spaced inwardly of a flat or bench portion 34 positioned inwardly of and at right angles to the outer faces 35 of the block. To attain a "perfect" bond between successive courses of blocks we have found that the "frog" portion 33 of the laid blocks must not only be completely filled but also have a sufficient amount of mortar provided as to fill a like space

4

formed in the next course of blocks placed on top of the course as shown. This we accomplish by having the thickness or height of strip 18 formed to correspond with the amount or thickness of the mortar strip required to fill both "frogs." The mortar positioning strip 18 is arranged to also function in the positioning of the mortar strip back sufficiently from the block faces 35 so as to prevent undesired extrusion of the mortar from between the blocks and thereby prevent the unsightly condition of having the mortar trip down onto the faces of the laid blocks.

Attached to each terminal block 22 as by suitable screw means 36 is vertically adjustable aligning plate 37. Each of the aligning plates 37 are formed with suitable slot means 38 through which screws 36 carried by the block 22 extend allowing for securing of the plate at various points as desired. Plate 37 is formed with an integral extension or arm 39 that extends at right angles and inwardly of the angle members 14 to engage top surfaces of the blocks 32. The arms 39 function to position the frame relative to the tops of the masonry blocks 32 independent of the strips 18 so as to allow for working masonry where different spacing thereof are desired. For instance, in the working of bricks where a flush positioning of the mortar strip is found desirable the strips 18 may be spaced flush with or outwardly of faces 15. In order to facilitate adjustment and to assure that the arms 39 are all positioned in the same plane a pointer 40 is provided at one edge of the plate 37 alignable with suitable indicia 41 marked on the side of each block 22.

Mounted on the angle members 14 and extending outwardly therefrom is a side handle 43 of conventional design that not only aids in the ready handling of the device 10 as a unit, but also provides for a more accurate positioning of the device when positioned from a side elevation as a unit or when separated into two units as hereinafter explained. Although we show the device 10 equipped with only one side handle 43, this is done for purposes of simplicity as in most cases a handle is provided at each side of the device. However, this feature is optional depending on the particular type of construction work to which the device 10 is to be applied.

It is to be noted that the device 10 is so constructed as to be easily separable into two distinct operative units by merely unscrewing the turnbuckles 30 from the studs 28 which allows for each side of the device to be then used from one side of the masonry course to position the mortar relative thereto. This feature is highly desirable in laying masonry blocks as facing members relative to an existing wall, or like construction where there is insufficient space provided in back of the blocks 32 for positioning the opposite side of the device 10.

In the operation of our device the side members 11 and 12 are straddled over the course of blocks 32, the lock nuts 31 are then backed off a sufficient distance to allow the turnbuckles 30 to be turned sufficiently to space the faces 15 in close engagement with the block faces 35. The lock nuts 31 are then retightened against the turnbuckles 30 locking them at the desired spacing. The arms 39 are then vertically adjusted to rest on the tops of the blocks with the strip 18 positioned slightly above the plane of the blocks. Strips 18 of the desired thickness are then adjusted to position the outer edge of

a strip of mortar to be applied to the masonry course either inwardly of the faces or otherwise as desired. It being understood of course that in laying glass blocks, strips 18 must be spaced inwardly of the faces 35 so as to effect spacing of a masonry strip to be applied to the brick course sufficiently back from the block faces as to allow for its normal squeezing between the blocks bonded together without effecting undesired extrusion of mortar beyond their edges. With the device 10 in such adjusted position on the course of masonry a quantity of mortar is then poured between strips and level off flush therewith by the running of a trowel along and horizontal to the straight edge 20. The device 10 can then be readily re-located to an adjacent section as desired by sliding it along the top of the course of laid blocks.

Having now described and illustrated one form of our invention we wish it to be understood that said invention is not to be limited to the specific form or arrangement of parts herein described and shown, but only as defined in the appended claims.

We claim as our invention:

1. A device for positioning a strip of mortar on a course of masonry blocks comprising a pair of spaced side members engageable with the opposite faces of masonry blocks having ends disposed at each side of the blocks, said side members being formed with a flange having a flat top surface, vertical terminal members attached to said ends having top portions extended above the plane of said side members, transverse members carried by oppositely spaced top portions of the terminal blocks with pairs of said transverse members having alignable ends spaced apart, said spaced ends being formed with oppositely extending screw threads, parallel connector means in threaded engagement between respective pairs of said ends for varying the spacing of said terminals on rotation of the connectors, a strip adjustably secured to the flange of each side member having a knife edge disposed above said flat top surface, said strip being movable transversely to extend inwardly of said side members to provide a spacing of lesser width than that of the side members, an angular plate adjustably secured to each terminal member, said plate having an arm disposed inwardly of and at right angles to said side members, indicia carried by said blocks adjacent the arms for indicating the relative alignment of said arms, and handle means extending from at least one of the side members.

2. A device for positioning a strip of mortar on a course of masonry comprising a pair of side members engageable with the opposite sides of a course of masonry, each of said side members being formed with a right angularly disposed top surface, a strip adjustably secured to each top surface portion of said side members hav-

ing a knife edge disposed above the plane of said top surface, said strips being movable transversely to extend inwardly of said side members to provide a spacing of lesser width than that of the side members, oppositely disposed vertical members secured to the end portions of said side members and free of said movable strips having top portions disposed above the plane of said strips, extensible transverse members extending between said top portions spaced above said strips, an angular plate adjustably secured to each of said vertical members, each of said plates having an arm disposed inwardly of and at right angles to said side members for sliding engagement along the top of the course of masonry, and indicia means associated with said vertical members for indicating the alignment of said arms.

3. A device for positioning a strip of mortar on a course of masonry comprising a pair of side members engageable with the opposite sides of a course of masonry, each of said side members being formed with a planar top surface, a strip adjustably secured to the top surface of each of said side members having a gauge edge disposed above the plane of said top surface with each strip being movable transversely to extend inwardly of said side members to provide a spacing therebetween of lesser width than that of the side members, oppositely disposed vertical members secured to said side members having elevated top portions, and extensible transverse members extending between said vertical members above the plane of said strips.

4. A device for positioning a strip of mortar on a course of masonry comprising a pair of side members engageable with opposite sides of the masonry course, each of said side members being formed with a planar top portion, a strip carried by and transversely adjustable of each said top portion members having an inner edge disposed above the plane of said side members, said strips being movable transversely to extend said inner edges inwardly of said side members, and transversely disposed handle means extending between said side members.

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