Sept. 22, 1953 L. F. LOOZE 2,652,715

CONCRETE BLOCK HANDLING TOOL

Filed Nov. 17, 1949

FIG. 1.

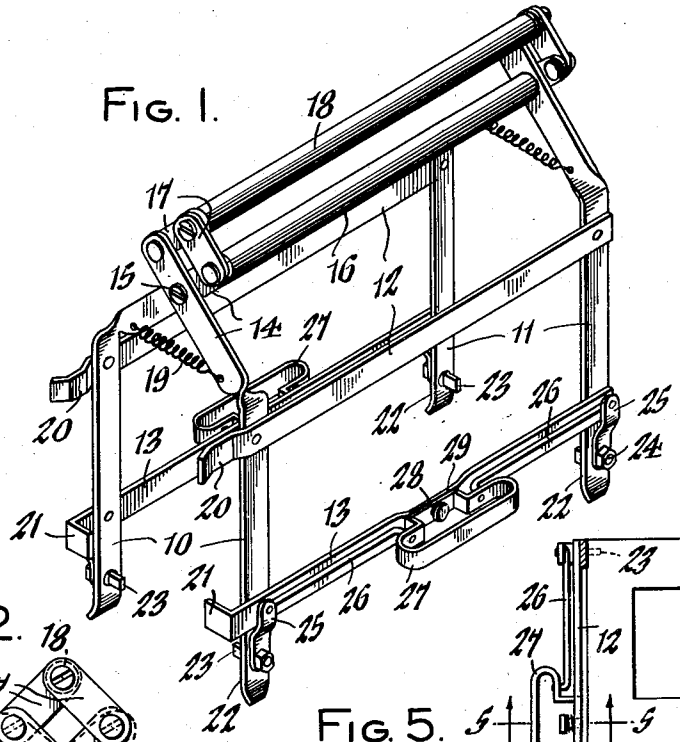


FIG. 2.

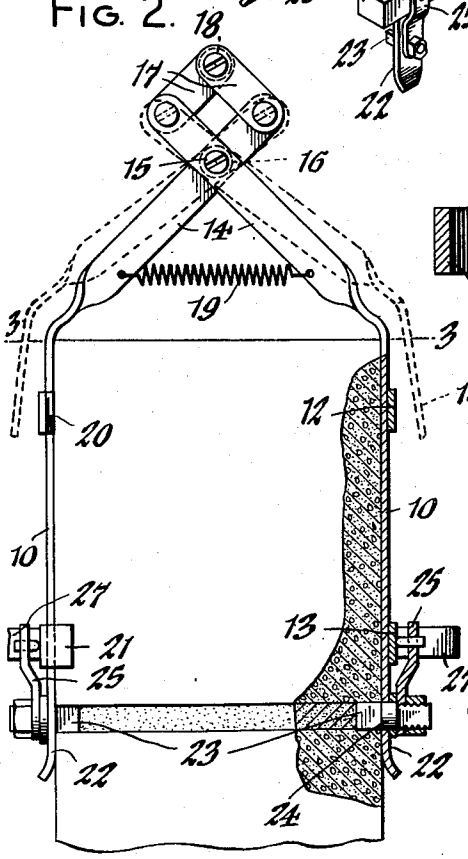


FIG. 3.

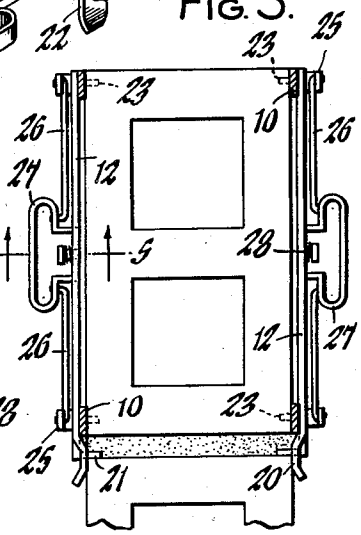


FIG. 5.

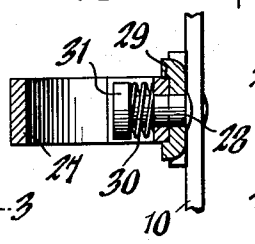
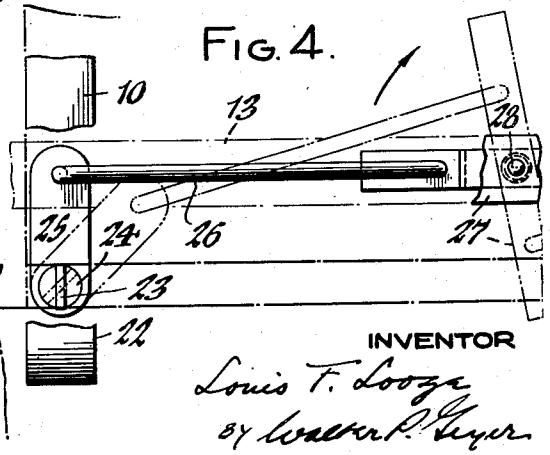


FIG. 4.



INVENTOR

Louis F. Looze

by Lockwood & Geyer

ATTORNEY

Patented Sept. 22, 1953 2,652,715

UNITED STATES PATENT OFFICE

2,652,715

CONCRETE BLOCK HANDLING TOOL

Louis F. Looze, Buffalo, N. Y.

Application November 17, 1949, Serial No. 127,955

2 Claims. (Cl. 72—129)

1

This invention relates to certain new and useful improvements in tools or implements for facilitating the handling and laying of concrete and like building blocks.

It has for one of its objects to provide a tool of this character which is so designed and constructed as to not only facilitate the manual lifting and handling of the blocks but to assure the laying of the blocks in properly spaced and alined relation both vertically and horizontally of the building wall.

Another object of the invention is to provide a block handling tool which is simple, compact, rugged and inexpensive in construction, and whose parts are so organized as to expedite the laying of the blocks uniformly and to render the tool readily adjustable when picking up a block for laying and for its release from the block after laying.

Other features of the invention reside in the construction and arrangement of parts hereinafter described and particularly pointed out in the appended claims.

In the accompanying drawings:

Figure 1 is a perspective view of the tool embodying my invention. Figure 2 is an enlarged end view thereof, partly in section. Figure 3 is a sectional plan view thereof taken on line 3—3, Figure 2. Figure 4 is an enlarged, fragmentary front view of the releasable means for governing the vertical spacing between the blocks. Figure 5 is an enlarged cross section taken on line 5—5, Figure 3.

Similar characters of reference indicate corresponding parts throughout the several views.

In its general organization the tool consists of a laterally-expansible and rigid frame to releasably receive and grip a standard type of concrete, cinder or similar composition building block and having fixed means thereon for gaging and predetermining the endwise spacing and longitudinal alinement of the blocks as they are laid in courses, and adjustable or releasable means for gaging the vertical spacing of the blocks in mortar line relation to the subjacent blocks.

In the preferred embodiment of the invention shown in the drawings, the frame is of open rectangular design composed of laterally-spaced upright front and rear end bars or legs 10, 11 and upper and lower longitudinal side bars 12, 13 suitably fixed to the latter in rigid fashion. Rising from the upper ends of the companion end bars and in crossed relation are companion suspension arms or extensions 14 pivoted intermediate their ends to each other at 15 and to the

2

ends of a longitudinal handle bar 16 spanning the end bars 10, 11. Beyond their pivots these suspension arms are pivotally connected by links 17 to the ends of a handle bar 18 companion and parallel to the bar 16, so that by grasping the handle bars with one hand and drawing them together the frame is caused to expand to an open position to receive a block for laying or release a block after laying. Substantially at the junction of the cross arms 14 with their companion pendant side bars 10, 11 and yieldingly connecting the same are transversely-disposed springs 19 which normally serve to urge and retain the frame in its contracted position and in clamping relation to the block during handling.

Adjacent the upper end of the frame at its front end and preferably formed integrally with the corresponding ends of the upper side bars 12 are longitudinal extensions or tongues 20 which project beyond the frame-bars 10 and which are adapted to abut laterally against the opposite sides of an adjoining laid block as the frame carrying the block about to be laid is brought into endwise relation to such laid block, as shown in Figure 3, to thereby assure proper longitudinal alinement of the blocks as they are laid endwise one against the other. To properly space the blocks in endwise relation and to provide a mortar space therebetween, the front ends of the lower side bars 13 extend beyond the companion upright bars 10 and terminate in inwardly-directed or lateral lugs 21 which are adapted to abut against the opposing end of a laid block as the block borne by the frame and about to be laid is brought into an operative block-laying position. It will be noted that the lower ends 22 of the upright bars 10, 11, when the frame is in a block-laying position, extend below the mortar space provided between superposed blocks and overlie the upper opposite sides of the subjacent block to provide lateral bearing gages which function to aline the blocks vertically as they are laid.

For the purpose of effecting a proper vertical spacing of the blocks in a true horizontal position to receive the mortar for the horizontal joints, the frame is provided with displaceable gaging elements 23 which serve to properly support the frame-carried block about to be laid and after being laid are adapted to be displaced to a position to readily effect the release of the tool from the weight of the block so as to thereafter enable the tool to be freely expanded and removed from operative engagement with the laid block. Four of these displaceable gaging elements are pro-

vided, one at the lower end of each of the end bars 10, 11 and below the lateral lugs 21, and each faces inwardly and is attached to a trunnion 24 free to revolve about a horizontal axis in its companion bar and having a crank arm 25 fixed on its outer end. The crank arms at each side of the frame are pivotally connected by links 26 to the opposite ends of a swiveling and axially-shiftable actuating handle 27 fulcrumed centrally thereof on a horizontal pivot 28 fixed to the middle portion of the companion lower side bar 13. As shown in Figure 5, the latter is channeled, as indicated at 29, to normally receive and retain the handle 27 in its normal position, shown by full lines in Figures 1 and 4, and a spring 30 coiled about the pivot 28 and bearing at one end against a head 31 thereon and at its other end against the opposing face of the handle normally retains the latter in its channel-engaging horizontal position with the gaging elements 23 in their vertical block-sustaining position. As depicted in Figures 1 and 4, these angularly displaceable elements are of substantially flat rectangular or web-like shape, so that when they are displaced to the position shown by dotted lines in Figure 4, they are clear of edgewise contact with the opposing faces of superposed blocks, and when the frame is expanded these elements will freely disengage from between the blocks.

The lower ends of the upright bars 10, 11 and the ends of the horizontal bar-extensions 20 may be flared outwardly, as shown, to facilitate guiding the frame with a block borne thereby into alining vertical and horizontal relation with the adjoining blocks already laid.

I claim as my invention:

1. A tool of the character described, comprising an expansible frame for releasable engagement with a building block and including upright laterally-spaced pivotally-mounted end bars and upper and lower longitudinal side bars fixed thereto, block-alining means depending from said end bars and longitudinally at one end from the upper side bars for facial alining contact, respectively, with the opposite sides of an adjoining subjacent laid block and with the companion sides of an endwise alined block, block-spacing lugs projecting laterally inward from one end of the lower side bars beyond the adjacent end bars for abutting contact with the end of an adjoining laid block for gaging the endwise mortar-receiving space between blocks, and angularly displaceable gage elements of greater height than width mounted in opposing relation adjacent the lower ends of said end bars for releasably supporting the block within the frame during handling and for gaging the mortar space between the subjacent laid block and the block about to be laid, and link means applied to each lower side bar and operatively connected to companion gage elements for actuating them in unison to their respective block-supporting and gaging positions.

2. A tool of the character described, comprising an expansible frame for releasable engagement with a building block and including upright laterally-spaced pivotally-mounted end bars and upper and lower longitudinal side bars fixed thereto, block-alining means depending from said end bars and longitudinally at one end from the upper side bars for facial alining contact, respectively, with the opposite sides of an adjoining subjacent laid block and with the companion sides of an endwise alined block, block-spacing lugs projecting laterally inward from one end of the lower side bars beyond the adjacent end bars for abutting contact with the end of an adjoining laid block for gaging the endwise mortar-receiving space between blocks, angularly displaceable elements mounted in opposing relation adjacent the lower ends of said end bars for releasably supporting the block within the frame during handling and for gaging the mortar space between the subjacent laid block and the block about to be laid, an actuating handle swivelly mounted centrally on each lower side bar and operatively connected to the companion gaging elements for governing their displacement to and from a block-releasing position.

LOUIS F. LOOZE.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
814,926	Weiss	Mar. 13, 1906
1,524,622	Jewasinski et al.	Jan. 27, 1925
1,541,616	Boggs	June 9, 1925
1,573,263	Madden	Feb. 16, 1926
2,543,716	Carini	Feb. 27, 1951
2,543,717	Carini	Feb. 27, 1951