This invention relates to a device for laying bricks, and more particularly relates to a device for clamping and holding a brick while it is being mortared and laid.

Self-clamping tongs for use in handling a plurality of bricks are well known. When such a device is placed over a row of loose bricks and is operably lifted, the jaws of the device close by gravity against the end-most bricks and exert a clamping action which is augmented by the weight of the bricks so that the bricks are frictionally retained in the tongs while being transported. Such devices depend upon the load being lifted to provide the necessary gripping action and are inoperable when the weight of the load is partially relieved by the bricks being placed on a supporting surface. The load is then insufficient to provide the necessary gripping action and the bricks must be further positioned and set in place by hand.

The device of this invention is provided with two handle members which can be manually clamped together and released as desired by a brick layer. The gripping action of the device is independent of the load being lifted so that a brick may be carefully set and adjusted in place before being released from the device.

Each jaw of the device is integral with one of two opposing handles and is biased only by the brick layer opening or closing the handles. To adapt the device for use with either standard size bricks of 7 1/2 by 9 1/2 in. or modular bricks of 7 1/2 by 7 1/2 in., the pivoted connection between the two handles be disposed well above the jaws so that the jaws can be biased sufficiently to accommodate either size of bricks. The tool may be provided of suitable size to handle Roman bricks (11 5/8") to 12 1/4") with an elongated portion of the rear jaw of the device disposed adjacent the top surface of the brick and may be used as a screed for applying mortar to the top of the brick.

It is an object of this invention to provide a brick laying device in which clamping action is exerted independent of load.

It is another object of this invention to provide a combined brick laying tool and screed which is adapted to use with either standard size bricks or modular bricks or Roman bricks.

It is another object of this invention to provide a tool adapted to handle bricks of variant sizes which comprises a screed adjacent the top surface and a screed adjacent an end surface of the brick.

Other objects will become apparent from the drawings and from the following detailed description in which it is intended to illustrate the applicability of the invention without thereby limiting its scope to less than that of all equivalents which will be apparent to one skilled in the art. In the drawings like reference numerals refer to like parts and:

FIGURE 1 is a perspective view of one embodiment of the device of this invention;
FIGURE 2 is a perspective view of another embodiment of the device of this invention;
FIGURE 3 is a perspective view of a modification of a portion of the device of FIGURE 2;
FIGURE 4 is a perspective view, partially schematic, of another embodiment, showing the first step in its use;
FIGURES 5 to 11 are perspective partially schematic views showing further steps in a process of utilizing the embodiment of FIGURE 4.

Referring now to FIGURES 4 to 11, the device indicated generally as 30 comprises two principal co-acting members 31 and 32 which are pivotally attached at 33 by a pin, screw, bolt or other suitable means. Member 31 comprises a handle portion 35 which may extend longitudinally and substantially horizontally from pivot 33 when the device is in the closed position, depending portion 37 which extends downwardly from pivot 33 and short longitudinally extending portion 38 adapted to engage one end of a brick.

Member 32 may comprise a handle portion 40 which may if desired be similar in form to portion 36 of member 31 and which may extend substantially horizontally and longitudinally from pivot 33, portion 41 depending downwardly from pivot 33 and thin, smooth longitudinally extending screed portion 42 which extends substantially under the handle portions and is substantially the length of the brick which is to be used; portion 42 is provided at its outer end with short downwardly extending screed portion 43.

As shown in FIGURE 4, air operator’s hand 50 may open the device to facilitate placing the device on brick 51 and as shown in FIGURE 5 the device may then be closed by suitable manipulation of hand 50 to grasp and pick up brick 51.

As with the previously described embodiments it may be noted that the embodiments of FIGURES 4 to 11 is provided with a pivot well above the surface of the brick; two handle portions are provided close together so that pressure can be easily applied to the brick; to hold it firmly) by squeezing together the two horizontal extending handle members and release can be accomplished easily; the longitudinally extending portion of the larger of the two pivotally attached members (portion 42) in the embodiments of FIGURES 4 to 11 is smooth on its upper surface. It has a smooth upper surface extending the full length of the brick so that it may be utilized as a screed; the longitudinally extending member is rigidly connected to (preferably integral with) the handle portion; the outer downwardly depending end portion of the longitudinal member (portion 43 in the embodiments of FIGURES 4 to 11) is made relatively small so that it may serve as a screed for the mortar on the end of the brick and leave room for the mortar.

As shown in FIG. 6, mortar 62 may be applied to the upper surface of brick 51 with trowel 53; portion 42 may be used as a screed as shown to provide a layer of mortar having uniform thickness, thereby facilitating the laying of the bricks in proper relationship to bricks previously laid in a structure. As shown in FIGURE 7 mortar may be likewise applied in a smooth layer of uniform thickness to the end of the brick, utilizing portion 43 as a screed.

As shown in FIGURE 8, the excess mortar may be conveniently struck off from the edges of the brick and as shown in FIGURE 9 the brick may conveniently be laid in place on a wall or other brick work, in conjunction with previously laid bricks, while trowel 53 is utilized to hold in place the mortar on the end of the brick. As shown in FIGURE 10, the brick 51 may thus be laid in square and true relationship with the other bricks in the structure and, as shown in FIGURE 11, hand 50 may be operated to open the device and remove it from the brick leaving the brick in place in conjunction with other bricks in the structure. It may be noted that when the device is removed, removal of screed portions 42 and 43 causes groove 55 to be left in the center of the upper surface of mortar 52 on top of the bricks with an indentation left in the mortar between the bricks.
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by portion 43, grooves 55' having been allowed to remain in bricks previously laid in the structure in similar manner. The presence of grooves 55 and 55' serve to facilitate final adjustment of the position of the bricks in the wall or other structure if necessary by suitable tapping of them by a hammer or other implement or by forcing them into desired position with the hand, in conventional manner.

In FIGURE 1 is shown device 10 comprising elongated rear jaw and upper handle member 11 and front jaw and lower handle member 12 pivotally fixed together by pivot 18. Elongated member 11 comprises handle 13, screw 14, and rear jaw 15, and member 12 comprises handle 16 and bifurcated front jaw 17.

When handle 13 is released as shown in FIGURE 1, jaws 15 and 16 are spread and device 10 can be placed longitudinally along the top surface of a brick (not shown) so that screw 14 rests on the upper surface of the brick. Handles 13 and 16 are then squeezed together thereby closing jaws 17 and 15 and clamping the brick. The brick is then evenly coated with mortar by the use of screw 14 and jaw 15, which latter member is preferably also configured as a screwed, and is set in place in operable manner. When the brick has been placed, handle portion 16 is released and device 10 is lifted from the brick so that the groove or valley is left in the mortar on top of the brick. The jaws preferably open sufficiently to enable bricks of any size from 7/8" inches long to 8½ inches long to be handled. It is apparent that the device may be adapted for use with bricks of other sizes, or with tile or block. It is preferred that screw 14 have a smooth level upper surface to enable a trowel to be passed thereover to provide a mortar layer of proper thickness on the upper surface of the brick.

In FIGURE 2 is shown a modification of device 10 of FIGURE 1 wherein device 10' comprises elongated member 21 and member 22 of modified configuration. Member 21 comprises handle 23, screw 24 non-symmetrically disposed with respect to handle 21, and rear jaw 25 fixedly attached to screw 24 at a terminal end extremity thereof. Member 22 comprises handle portion 26 and front jaw portion 27. Jaw 27 is non-symmetrically disposed with respect to handle 26 and is angled under screw 24 in longitudinal alignment with jaw 25. As shown, jaw 27 may be opened only a restricted distance before its further movement is obstructed by contact with screw 24. Compression means (not shown) may be disposed between handles 23 and 26 if desired to assist in opening device 10'; however, the weight of handle 26 is sufficient to open device 10' without mechanical assistance when the device is disposed above the brick in upright position as is normally employed. Pivot 18' is disposed well above screw 24 in much closer adjacency to handles 23 and 26 than to the jaws of the device or even to the screw to provide a large biasing movement of the jaws for a relatively small movement of the handles.

In FIGURE 3 is shown another embodiment of the invention similar to that shown in FIGURE 2 but wherein modified jaw 28 is shown. Jaw 28 is angled under screw 24 a sufficient distance to enable it to swing clear of the end thereof when the jaws of the device are fully opened. Only the contact of handle 22 with screw 24 limits the outward movement of jaw 28.

Either the jaw or the handle portions of the brick laying means of this invention may be configured as bifurcate members if desired; the handle portions may be configured to be biasable into side-by-side relation. While various other configurations of the device of this invention may be provided, it will be understood that a device wherein closable jaw portions are pivotally connected in nearer adjacency to the carrying handle than to the jaws of the device to enable the device to be easily manipulated and widely opened and wherein closable handles are disposed to bias the jaw portions into closer adjacency when the handles are closed than when open, one handle and jaw member being configured to provide a screwed across the top of a brick operably within the scope of this invention.

While certain modifications and embodiments of the invention have been described, it is of course to be understood that there are a great number of variations which will suggest themselves to anyone familiar with the subject matter thereof, and it is to be distinctly understood that this invention should not be limited except by such limitations as are clearly imposed in the appended claims.

1. A device for laying brick comprising in combination two pivotally connected lever members, the first said lever member comprising an upper handle portion, pivotal connecting means adjacent said handle portion, a depending portion below said pivotal connecting means, a screwed portion rearwardly extending from said depending portion, said screwed portion being adapted to be disposed adjacent a portion of the top surface of a brick which extends for the entire length of the brick to be carried, a terminal rear jaw portion depending downward from said screwed portion, the second said lever member comprising a lower handle portion disposed immediately below said upper handle portion of said first lever member, said pivotal connecting means being disposed adjacent said lower handle portion and affixed thereto to operably couple said second lever member to said first lever member, said second lever having a portion which depends below the pivotal connecting means of said second lever member and a front jaw portion disposed at the lower terminal extremity of said depending portion of said second lever member, said front jaw member being operably biasable toward said rear jaw portion when said levers are moved toward each other.

2. The device of claim 1 wherein said depending portion of said first lever member and said depending portion of said second lever member are disposed in substantially vertically adjacent.

3. The device of claim 1 wherein said front jaw portion swings clear of said first lever member.

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