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JIG AND CARRIER FOR BUILDING BLOCKS

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Fig. 1

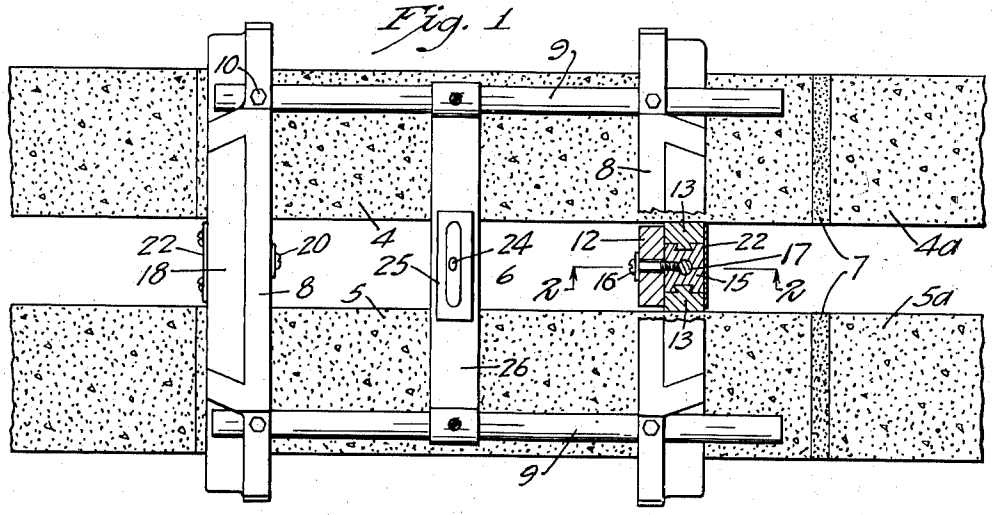


Fig. 2

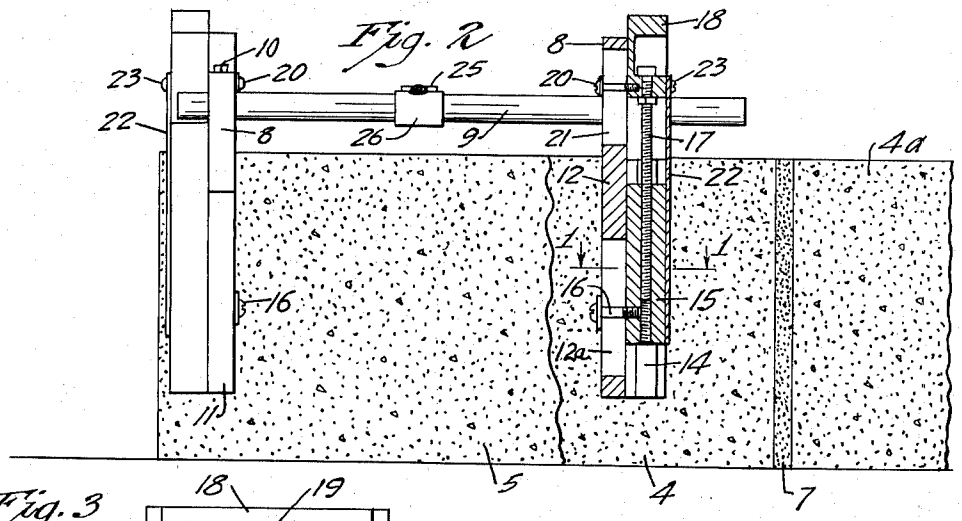
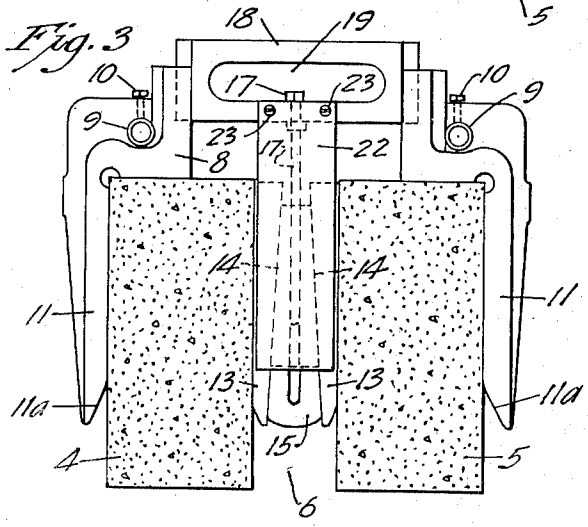


Fig. 3



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JIG AND CARRIER FOR BUILDING BLOCKS

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This invention relates to a jig and carrier which is particularly adapted for use in the construction of walls composed of horizontally spaced courses of blocks and has for its object the reduction of the time and labor required to properly place and accurately space successive pairs of the blocks along horizontally spaced parallel courses.

A particular object of my invention is to provide a device of the class described having gripping members adapted to engage opposite faces of each of the blocks of a pair and to hold the blocks in accurately spaced relation one to the other while they are carried to and properly placed in their permanent positions as component parts of a wall.

A further object is to provide a jig and carrier of the class described with novel block gripping members and operating mechanism therefor adapted to be actuated quickly and with a minimum of effort on the part of the operator to pick up, carry, accurately place and release pairs of building blocks.

My invention also includes certain novel features of construction which will be more fully pointed out in the following specification and claims.

Referring to the accompanying drawing which illustrates, by way of example and not for the purpose of limitation, a preferred embodiment of my invention:

Figure 1 is a part plan view and part horizontal section taken on the line 1—1 of Fig. 2 and showing my device in operative relation to a pair of building blocks;

Fig. 2 is a part side elevational view and part vertical sectional view taken on the line 2—2 of Fig. 1, one of the blocks being broken away to show parts otherwise concealed, and

Fig. 3 is an end elevational view showing my device in place on a pair of building blocks.

In the drawing a pair of rectangular building blocks of common type are indicated by the numerals 4 and 5. These may be constructed from concrete or other suitable molded or cementitious material bonded in blocks of sizes adapted for use in the construction of walls of the type having a continuous air space 6 between inner and outer wall portions, each of these portions being composed of horizontal courses of blocks held together by suitable mortar joints. In Figs. 1 and 2 the blocks 4 and 5 are shown as disposed in continuation of blocks 4a and 5a, mortar joints 7 being provided between the end surfaces of adjoining blocks.

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My device is provided with a pair of similar frame members 8 adapted to extend across the top of the blocks 4 and 5 and connected together by rigid bars 9 extending longitudinally of the blocks. The spacing of the frame members 8 is adjustable to accommodate blocks of various lengths and suitable bearings for the bars 9 are formed in the frame members 8. Set screws 10 are threaded in the members 8 in position to engage the bars 9 to secure the frame members in adjusted positions.

Depending from the ends of each of the frame members 8 is a pair of rigid jaw members 11 adapted to engage the outer surfaces of the respective blocks 4 and 5. Beveled lower end surfaces 11a are formed on the jaw members 11 to facilitate the lowering of the jig and carrier upon a pair of blocks. Depending from the central portion of each of the frame members 8 is a rigid support 12 for a pair of jaw members 13 adapted to engage the inner surfaces of the blocks 4 and 5. These jaw members are wedge shaped and have inner surfaces 14 which diverge one relative to the other laterally downward for sliding engagement with a vertically movable wedge member 15. The latter is provided with downwardly diverging opposite surfaces adapted to fit in sliding engagement with the surfaces 14 of the jaw members 13. Dovetail connections are provided between the member 15 and jaw members 13 and the member 15 is held in sliding engagement with its support 12 by means of a bolt 16 which has a threaded connection with the wedge member 15 and is movable vertically in a vertically elongated slot 12a formed in the member 12. The head of the bolt 16 is provided with a washer to slidably engage the inner surface of the frame member 12.

The wedge member 15 carried by each of the frame members 12 is supported by an adjusting bolt 17 which extends vertically and has a threaded connection with the wedge member. At its upper end the bolt 17 is connected to a handle 18 which is free for limited vertical movement in a dovetail bearing formed in the frame member 8. A hand hold recess 19 is formed in the handle 18 and the head of the bolt 17 is accessible in this recess for turning the bolt to adjust the vertical position of the wedge member 15 relative to the jaw members 13. This adjustment affords means for compensating for variations in the thickness of the blocks 4 and 5. A stop screw 20 is threaded in each of the handles 18 and projects through a vertically elongated slot 21 formed in the frame member 8 to limit upward movement of the handle 18 when the device is re-

moved from the blocks. Closure plates 22 are fastened by screws 23 to the handles 18 and extend downward therefrom to exclude mortar and other foreign matter which might interfere with the operation of the device from the working surfaces of the wedge member 15 and jaw members 13.

In Figs. 2 and 3 of the drawing the handles 18 and wedge members 15 are shown in their upwardly extended positions wherein they hold the jaw members 13 in laterally extended or gripping position in relation to the blocks 4 and 5. When in this operative position the frame members 8 rest on the upper surfaces of the blocks and the jaw members 11 afford stops against which the outer surfaces of the blocks 4 and 5 are securely held. The operator by grasping the handles 18 is thus enabled to lift and carry the blocks 4 and 5 and to retain them in accurately spaced relation one to the other while they are placed in proper position on the wall under construction. The accurate placing of the blocks is further facilitated by providing a spirit level 24 which is mounted on a bar 25 extending across the top of the frame and secured at its ends to the bars 9. The end portions of the bar 25 are formed to embrace the bars 9 respectively and are held in position by suitable set screws. Thus the spirit level 24, which extends laterally of the blocks and in exact parallelism with their upper surfaces, affords means for adjusting the level of the blocks while they are held in the jig, thereby further facilitating the disposition of the blocks in proper horizontal position as elements of the wall under construction.

In using my device, the blocks of a pair are placed side by side on a suitable, substantially flat support and my improved jig and carrier is applied to such blocks with the wedge members 15 in released or downwardly extending position so that the jaws 13 are retracted laterally. The device is thus placed in engagement with the blocks with the frame members 8 resting on the upper surfaces thereof and the operator then grasps the handles 18 and applies lifting force thereto so that the jaw members 13 are automatically extended laterally to grip the blocks while they are carried to the site where they are to be used in the construction of a wall. Ordinarily the successive pairs of blocks are placed at the ends of previously placed blocks, such as the blocks 4*a* and 5*a*, after the plastic mortar 7 has been applied at the ends of the blocks 4*a* and 5*a* and after layers of mortar have been applied to the upper surfaces of the foundation or course of blocks below. The positions of the blocks 4 and 5 are then adjusted by reference to the spirit level 24 and such other guides as may be employed to properly locate the pair of blocks. Finally my device is removed from the blocks after merely releasing the handles 18 to allow the jaw members 13 to be retracted by gravity acting on the wedge members 15 and connections with the handles 18. The foregoing operation is repeated until the wall is complete.

It will be evident that the blocks when held in the grip of my device are accurately spaced, one relative to the other, and that the work of handling and accurately setting the blocks is greatly facilitated.

Having described my invention, what I claim as new and desire to protect by Letters Patent is:

1. A jig and carrier for building blocks comprising, a frame adapted to extend above the upper surfaces of a pair of said blocks with the blocks disposed in horizontally spaced relation one to the other, fixed jaw members depending from said frame for engagement with opposite outer surfaces of the respective blocks so disposed, movable jaw members depending from said frame in the space between blocks for engagement with opposite inner surfaces of the respective blocks and handle means operatively connected to said movable jaw members to grip the blocks between said fixed and movable jaw members.

2. A jig and carrier for building blocks comprising, a frame adapted to extend above the upper surfaces of a pair of said blocks with the blocks disposed in horizontally spaced relation one to the other, fixed jaw members depending from said frame for engagement with opposite outer surfaces of the respective blocks so disposed, movable jaw members depending from said frame in the space between blocks for engagement with opposite inner surfaces of the respective blocks, wedge means for actuating said movable jaw members to engage said blocks and handle means operatively connected to said wedge means for actuating said movable jaw members to engage the blocks.

3. A jig and carrier for building blocks comprising, spaced parallel frame members adapted to extend across the upper surfaces of a pair of said blocks with the blocks disposed in horizontally spaced relation one to the other, a pair of fixed jaw members depending from each of said frame members for engagement with opposite outer surfaces of the respective blocks so disposed, a pair of movable jaw members depending from each of said frame members in the space between blocks for engagement with opposite inner surfaces of the respective blocks and a handle operatively connected to each pair of movable jaw members to actuate them to engage the blocks.

4. A jig and carrier for building blocks comprising, a frame adapted to extend above the upper surfaces of a pair of said blocks with the blocks disposed in horizontally spaced relation one to the other, fixed jaw members depending from said frame for engagement with opposite outer surfaces of the respective blocks so disposed, a support for movable jaw members depending from said frame in the space between blocks, laterally movable jaw members carried by said support for engagement with opposite inner surfaces of the respective blocks and handle means operatively connected to said movable jaw members to grip the blocks between said fixed and movable jaw members.

5. A jig and carrier for building blocks comprising, a frame adapted to extend above the upper surfaces of a pair of said blocks with the blocks disposed in horizontally spaced relation one to the other, fixed jaw members depending from said frame for engagement with opposite outer surfaces of the respective blocks so disposed, a support for movable jaw members depending from said frame in the space between blocks, movable jaw members carried by said support for engagement with opposite inner surfaces of the respective blocks, wedge means for actuating said movable jaw members to engage said blocks and handle means operatively connected to said wedge means to grip the blocks between said fixed and movable jaw members.

6. A jig and carrier for placing a pair of building blocks in fixed horizontally spaced relation one relative to the other in position as elements

of a wall, the improvements which comprise, frame members adapted to extend crossways and above the upper surfaces of the building blocks of a pair, a plurality of fixed jaw members depending in fixed spaced relation one to another from each of said frame members for engagement with substantially vertical surfaces of each of said blocks when said blocks are in predetermined spaced relation one to the other, rigid supports depending from each of said frame members in fixed spaced relation to the several fixed jaw members, a movable jaw member carried by each of said supports for engagement with the adjacent surface of one of said blocks, substantially vertically movable wedges disposed to actuate the several movable jaw members laterally to grip said blocks, a handle carried by each of said frame members and means operatively connecting said handles to the several wedges whereby said movable jaw members may be actuated to grip and accurately space said blocks in contact with the several fixed jaw members when lifting force is applied to said handles.

7. The jig and carrier in accordance with claim 6 in which said means operatively connecting the handles to the wedges comprise threaded means depending from the handles whereby the elevations of the wedges relative to the handles may be adjusted.

8. A jig and carrier for placing a pair of building blocks in fixed horizontally spaced and level relation one relative to the other in position as elements of a wall, the improvements which comprise, a frame having members adapted to extend crossways upon the upper surfaces of the building blocks of a pair, each of said frame members having normally horizontal surfaces

for engagement with normally horizontal top surfaces of both of said blocks, a plurality of fixed jaw members depending in fixed spaced relation one to the other from each of said frame members for engagement with substantially vertical surfaces of each of said blocks when said blocks are in predetermined spaced relation one to the other, movable jaw members depending from each of said frame members adjacent to substantially vertical surfaces of each of said blocks opposite to the several fixed jaw members, handle means operatively connected to said movable jaw members to grip and accurately space said blocks in contact with said fixed jaw members and with the top surfaces of said blocks in contact with said horizontal surfaces of said frame members and a spirit level fixed on said frame in precise parallel relation to said horizontal surfaces thereof and operative to facilitate the setting of the pair of blocks held in the grip of said jaw member in a mutually level position as elements of a wall.

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