

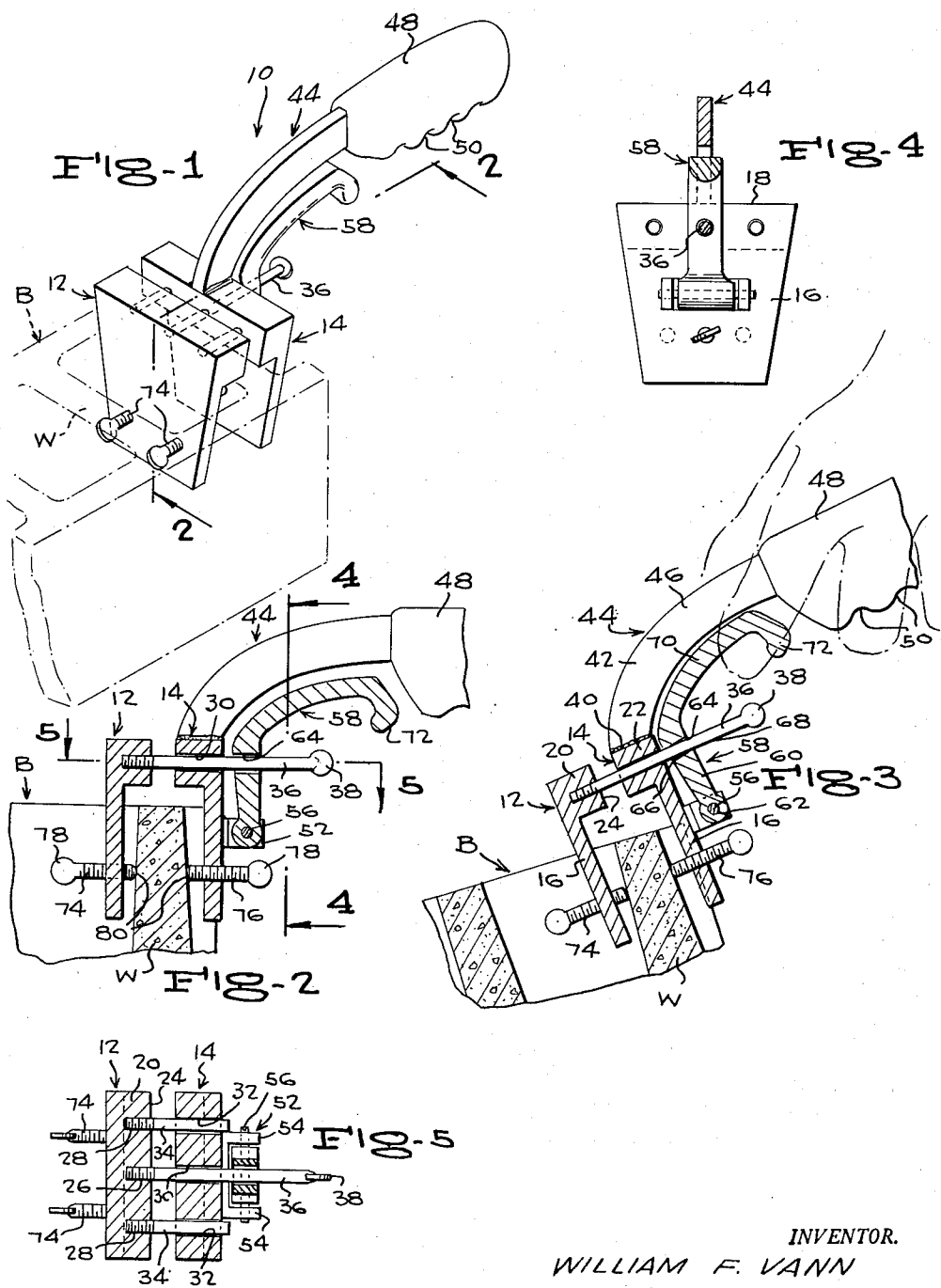
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CONCRETE BLOCK LIFTER

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CONCRETE BLOCK LIFTER

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This invention relates to an improved lifter for such as concrete building blocks.

The primary object of the invention is to provide a more efficient, more easily usable device of the kind indicated, which is readily adjustable to grip the walls or partitions of such a concrete building block having different shaped cores, defining walls and partitions of differing thicknesses and cross sections.

Another object of the invention is to provide a device of the character indicated which involves a relatively stationary jaw and an adjustable jaw mounted on and movable relative to the stationary, a handle on one of the jaws, and a manually operated frictional locking lever for locking the movable jaw in adjusted position during a lifting operation, these components being of simple and uncomplicated form and being easily assembled and disassembled.

Other important objects and advantageous features of the invention will be apparent from the following description, taken with the accompanying drawings, wherein, for purposes of illustration only, a specific form of the invention is set forth in detail.

In the drawings:

Figure 1 is a perspective view showing a device of the invention being applied to a concrete building block;

Figure 2 is a fragmentary vertical longitudinal section taken on the line 2—2 of Figure 1, showing the device applied in adjusted condition to a wall of the block;

Figure 3 is a view similar to Figure 2, but showing the device tilted relative to the block wall, incidental to lifting of the handle of the device by a hand, shown in phantom lines;

Figure 4 is a transverse vertical section taken on the line 4—4 of Figure 2; and

Figure 5 is a horizontal section taken on the line 5—5 of Figure 2.

Referring in detail to the drawings, wherein like numerals designate like parts throughout the several views, the illustrated device, generally designated 10, comprises a pair of similar, opposed, and registered jaws, consisting of a movable jaw 12 and a relatively stationary jaw 14. Each of the jaws is composed of a vertical flat plate 16, preferably of wedge or tapered shape, having a wide upper edge 18. Fixed or formed on the facing sides of the jaws 12 and 14 and flush with the upper edges 18 thereof, are horizontally elongated blocks or enlargements 20 and 22, respectively.

Formed in the block 20 of the movable jaw 12 and opening to its face 24 are longitudinally spaced threaded sockets which include a center or middle socket 26 and outer sockets 28. Formed through the block 22 of the stationary jaw 14 are longitudinally spaced smooth bores which include a middle or center bore 30 and outer bores 32, positioned to align with related ones of the sockets in the movable jaw. Smooth outer pins 34 are threaded at one end in the outer sockets 28 and extend through the outer bores 32, and a relatively long middle or center pin 36 is threaded at one end in the center socket 26

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and extends through the center bore 30 and beyond the movable jaw 14, as is clear from Figures 2, 3, and 5. The free end of the middle pin 36 is provided with a combined stop and pin rotating head 38, which is preferably in the form of a flat wing. The pins and the bores in which they are engaged provide a nontilting, nonrotating, straight line adjustable mounting of the movable jaw 12 on the stationary jaw 14.

Fixed centrally on the top of the block 22 of the stationary jaw 14, as indicated at 40, is the downwardly curved forward end portion 42 of a handle 44, which includes a substantially straight, horizontal portion 46, on which is secured a generally cylindrical grip 48, preferably having finger-accommodating notches 50 along its underside, the handle 44 extending in a direction away from the movable jaw 12, with its straight portion 46 substantially at right angles to both of the jaws.

A clevis 52 having spaced ears 54, is fixed to and extends rearwardly from a central part of the stationary jaw 14, and a removable pivot pin 56 extends securably through the ears 54. A locking lever 58 comprises a depending vertical portion 60 which is journaled at its lower end, as indicated at 62, on the pin 56 between the ears 54, and has therethrough, on a level with the center bore 30 of the fixed jaw 14, a smooth bore 64. The lever bore 64 is larger in diameter than the center pin 36, and the ends of the bore 64 meet related sides of the lever portion 60 so as to define locking edges 66 and 68 for binding on the center pin. The locking lever 58 further comprises a curved intermediate portion 70 fixed on and extending rearwardly from the vertical portion 60, and preferably conforming in curvature with the curved portion 42 of the handle 44. The intermediate lever portion 70 terminates at its rear end in a downwardly extending trigger portion 72, which is located at the forward end of the hand grip 48, so as to be readily reached and moved upwardly, as by the thumb and forefinger of a hand H grasping the grip 48.

For direct frictional contact with related sides of a wall W of such as a concrete block B, as shown in Figures 2 and 3, the jaws 12 and 14 are each provided with two or more laterally spaced screws threaded therethrough, which constitute adjustable contact elements. The said screws include screws 74 for the movable jaw 12 and screws 76 for the stationary jaw 14, which are severally aligned with each other, and are located above and near to the lower edges of the jaw plates 16, and extend therethrough at right angles to the plates. The screws are similar and have rotating heads 78, such as flat wings, on their outer ends, and plain terminals 80 on their inner ends, which reach inwardly away from the facing sides of the jaws in accordance with the adjustments of the screws deemed proper for gripping a block wall W and lifting a block B, with the jaw blocks or enlargements 20 and 22 spaced from each other, in order to afford freedom of action of the movable jaw 12 relative to the stationary jaw 14, in a lifting operation.

With the contact screws adjusted in accordance with the thickness and contour of a block wall W, and the jaws applied to opposite sides of the wall, the hand grip 48 is grasped in the hand and fingers applied to elevate the locking lever 58, so as to apply the gripping edges 66 and 68 at the ends of the lever bore 64 to the center pin 36, serving as a detent element, and thereby prevent the pin 36 from shifting in the bore 64, so as to hold the jaws in gripping relation to the block wall W. To release the lifter from the wall W, the grip on the lever 58 is relaxed, so as to enable the center pin 36 to move forwardly in the bore 64 and the movable jaw 12 to move away from the fixed jaw 14.

It will be understood that use of the above described device is not restricted to lifting of concrete blocks, but

can be used for lifting any objects to which the same may be found suitable.

While there has been shown and described a preferred form of the invention, it is to be understood that the invention is not necessarily confined thereto, and that any change or changes in the structure of and in the relative arrangements of components thereof are contemplated as being within the scope of the invention as defined by the claims appended hereto.

What is claimed is:

1. A lifter comprising a movable jaw, a fixed jaw facing the movable jaw, means nontiltably and nonrotatably mounting the movable jaw on the fixed jaw for movement toward and away from the fixed jaw, a handle fixed on the stationary jaw and extending laterally therefrom, a locking lever pivoted on the fixed jaw and located adjacent to the handle, and detent means fixed to the movable jaw and engageable by said lever for locking the movable jaw in adjusted relation to the fixed jaw.

2. A lifter comprising a movable jaw, a fixed jaw facing the movable jaw, means nontiltably and nonrotatably mounting the movable jaw on the fixed jaw for movement toward and away from the fixed jaw, a handle fixed on the stationary jaw and extending laterally therefrom, a locking lever pivoted on the fixed jaw and located adjacent to the handle, and detent means fixed to the movable jaw and engageable by said lever for locking the movable jaw in adjusted relation to the fixed jaw, and adjustable contact means extending on the facing sides of the jaws.

3. A lifter comprising a movable jaw, a fixed jaw facing the movable jaw, means nontiltably and nonrotatably mounting the movable jaw on the fixed jaw for movement toward and away from the fixed jaw, a handle fixed on the stationary jaw and extending laterally therefrom, a locking lever pivoted on the fixed jaw and located adjacent to the handle, and detent means fixed to the movable jaw and engageable by said lever for locking the movable jaw in adjusted relation to the fixed jaw, and adjustable contact means extending on the facing sides of the jaws, said contact means comprising screws threaded in the jaws.

4. A lifter comprising a movable jaw, a fixed jaw facing the movable jaw, means nontiltably and nonrotatably mounting the movable jaw on the fixed jaw for movement toward and away from the fixed jaw, a handle fixed on the stationary jaw and extending laterally therefrom, a locking lever pivoted on the fixed jaw and located adjacent to the handle, and detent means fixed to the movable jaw and engageable by said lever for locking the movable jaw in adjusted relation to the fixed jaw, said mounting means comprising pin means fixed on said fixed jaw, the movable jaw having bore means through which the pin means are slidably engaged.

5. A lifter comprising a movable jaw, a fixed jaw facing the movable jaw, means nontiltably and nonrotatably mounting the movable jaw on the fixed jaw for movement toward and away from the fixed jaw, a handle fixed on the stationary jaw and extending laterally therefrom, a locking lever pivoted on the fixed jaw and located ad-

jacent to the handle, and detent means fixed to the movable jaw and engageable by said lever for locking the movable jaw in adjusted relation to the fixed jaw, said mounting means comprising pin means fixed on a jaw, the other jaw having bore means through which the pin means are slidably engaged, said pin means comprising outer pins and a center pin fixed on the movable jaw, the fixed jaw having outer bores and a center bore through which related pins extend, the center pin constituting said detent means.

6. A lifter comprising a movable jaw, a fixed jaw facing the movable jaw, means nontiltably and nonrotatably mounting the movable jaw on the fixed jaw for movement toward and away from the fixed jaw, a handle fixed on the stationary jaw and extending laterally therefrom, a locking lever pivoted on the fixed jaw and located adjacent to the handle, and detent means fixed to the movable jaw and engageable by said lever for locking the movable jaw in adjusted relation to the fixed jaw, said mounting means comprising pin means fixed on a jaw, the other jaw having bore means through which the pin means are slidably engaged, said pin means comprising outer pins and a center pin fixed on the movable jaw, the fixed jaw having outer bores and a center bore through which related pins extend, the center pin constituting said detent means, said locking lever having a detent bore aligned with said center bore with the center pin extending through the detent bore, the detent bore being larger in diameter than the center pin, and edges at the ends of the detent bore for binding engagement with the detent pin in a pivoted position of the locking lever.

7. A lifter comprising a movable jaw, a fixed jaw facing the movable jaw, means nontiltably and nonrotatably mounting the movable jaw on the fixed jaw for movement toward and away from the fixed jaw, a handle fixed on the stationary jaw and extending laterally therefrom, a locking lever pivoted on the fixed jaw and located adjacent to the handle, and detent means fixed to the movable jaw and engageable by said lever for locking the movable jaw in adjusted relation to the fixed jaw, said mounting means comprising pin means fixed on a jaw, the other jaw having bore means through which the pin means are slidably engaged, said pin means comprising outer pins and a center pin fixed on the movable jaw, the fixed jaw having outer bores and a center bore through which related pins extend, the center pin constituting said detent means, said locking lever having a detent bore aligned with said center bore with the center pin extending through the detent bore, the detent bore being larger in diameter than the center pin, and edges at the ends of the detent bore for binding engagement with the detent pin in a pivoted position of the locking lever, said handle extending in a direction away from the movable jaw, and said locking lever having a portion extending along the handle.

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