Feb. 19, 1952 L. R. HENDERSON 2,586,227

SCAFFOLD FOR HANDLING SHEET MATERIAL

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FIG. 1

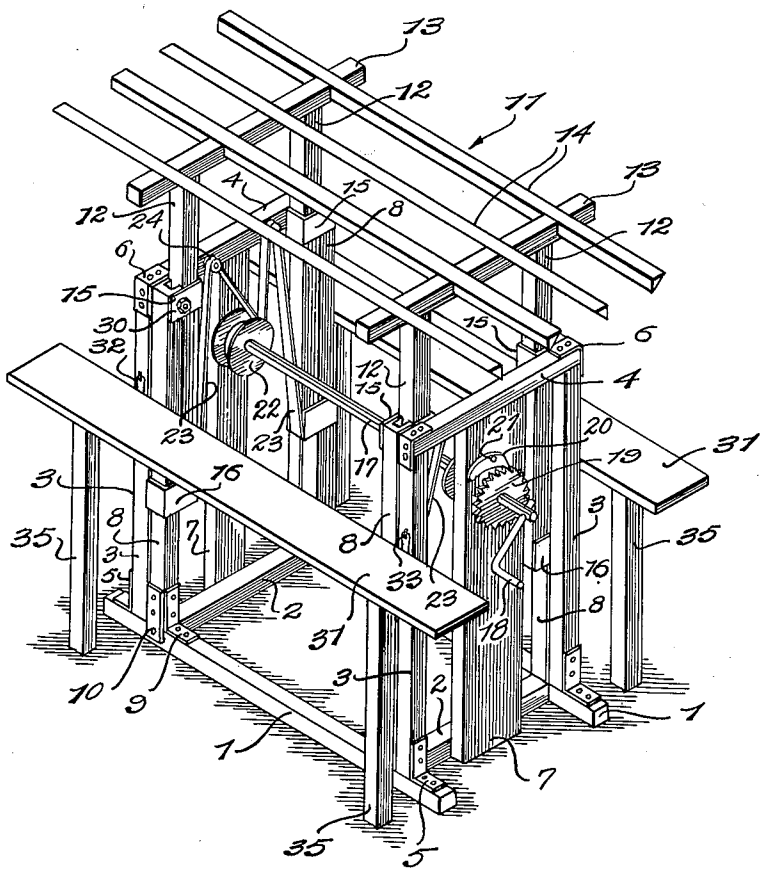
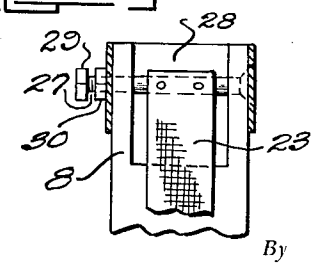


FIG. 5



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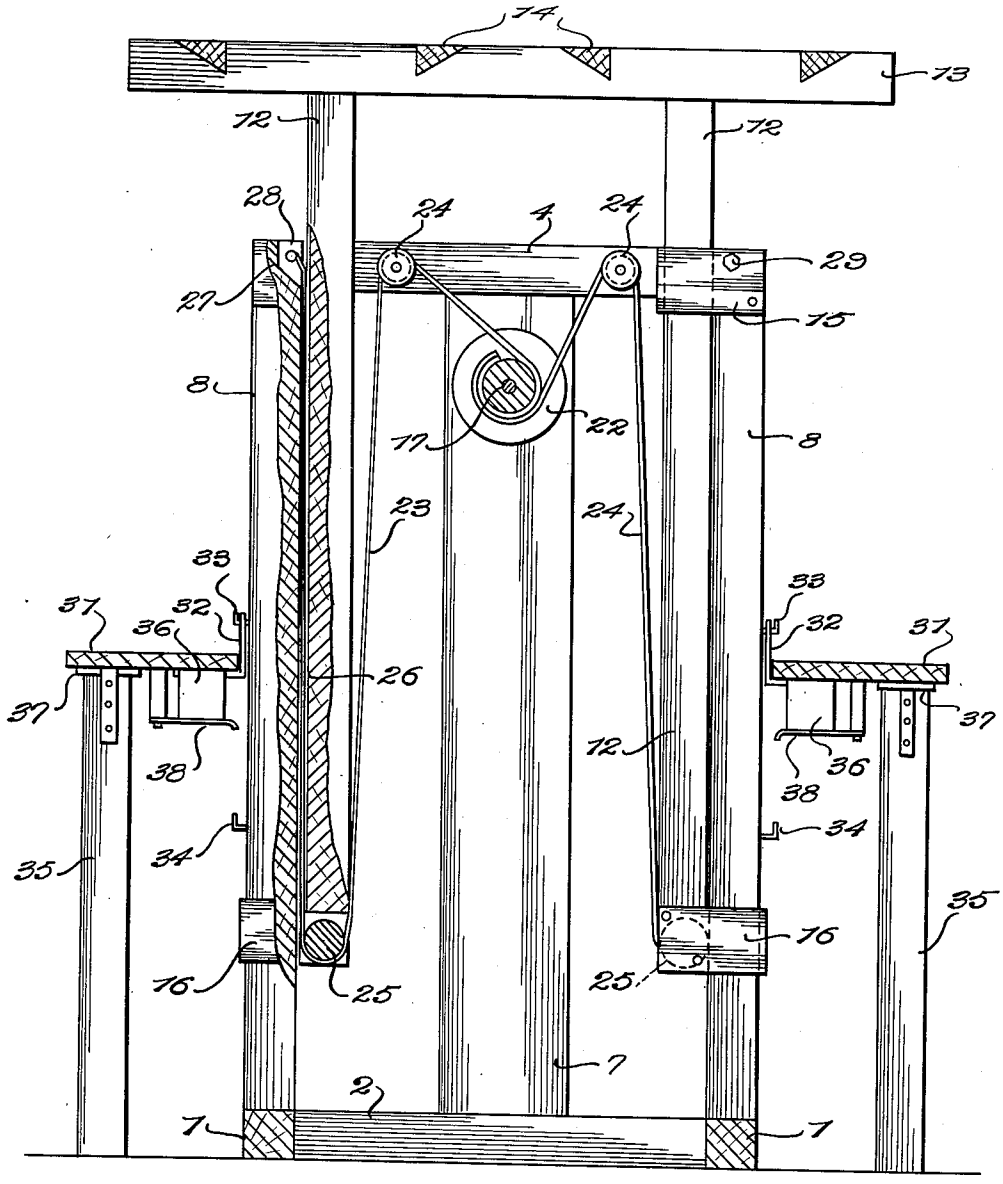
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FIG. 2



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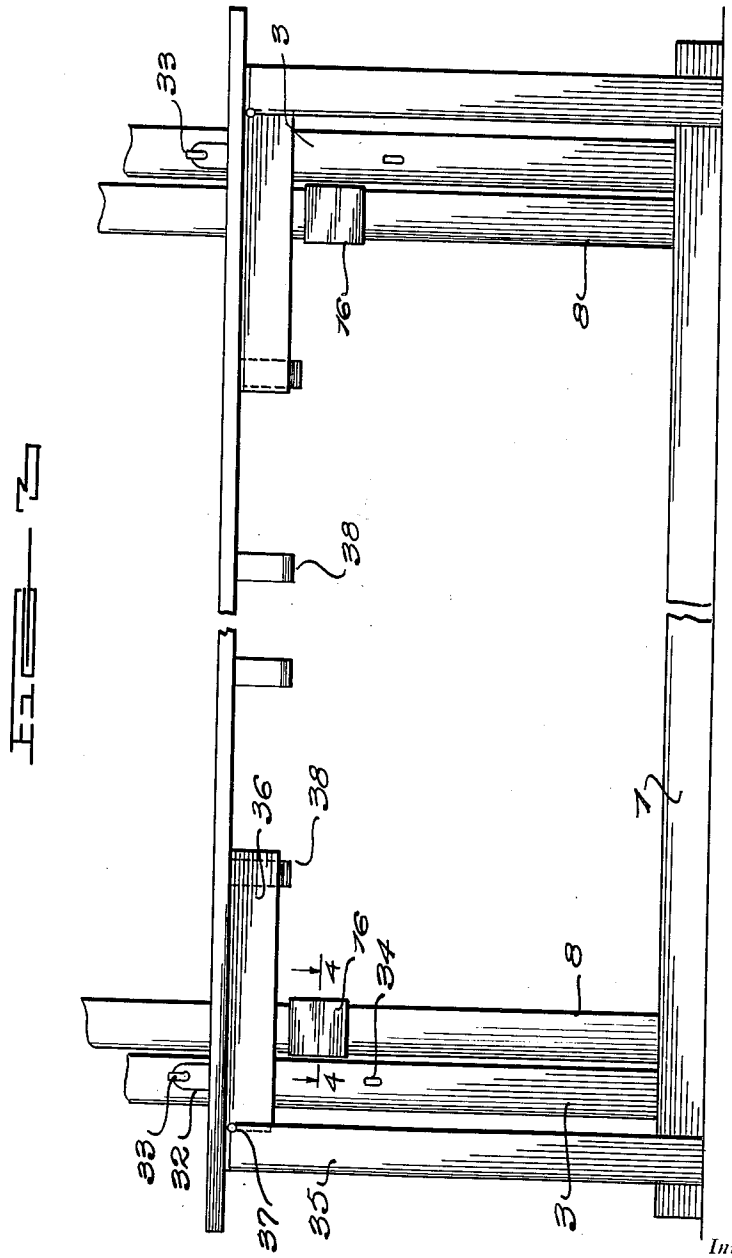


FIG. 2

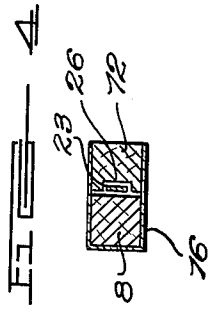


FIG. 4

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UNITED STATES PATENT OFFICE

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SCAFFOLD FOR HANDLING SHEET MATERIAL

Lee Roy Henderson, Sunnyvale, Calif.

Application July 9, 1946, Serial No. 682,266

1 Claim. (Cl. 304—29)

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My invention relates to improvements in scaffolds for handling sheet materials in buildings especially.

My invention is designed with the primary object in view of providing a simply constructed scaffold for quickly and easily lifting plasterboard, wall board panels and the like to ceiling level for nailing or otherwise securing in place, and which is safe to operate, adapted to lift the panels in level position, and designed for easy moving from room to room as occasion may require.

Other and subordinate objects, also comprehended by my invention, together with the precise nature of my improvements, and the advantages thereof, will be readily understood when the succeeding description and claim are read in reference to the drawings accompanying and forming part of this specification.

In said drawings:

Figure 1 is a view in perspective of my improved scaffold in a preferred embodiment thereof,

Figure 2 is a view in vertical transverse section drawn to a larger scale,

Figure 3 is a fragmentary view in side elevation,

Figure 4 is a detailed view in horizontal section taken on the line 4—4 of Figure 3, and

Figure 5 is a fragmentary view in rear elevation of one of the end posts and the bolt therein for taking up slack in one of the bands.

Referring to the drawings by numerals, my improved scaffold, as illustrated, comprises a substantially rectangular scaffold frame including a pair of parallel, base, side beams 1 connected together adjacent the ends thereof by a pair of base end beams 2. Corner uprights 3 arise from the base side beams 1 and are connected together in end pairs by upper cross beams 4 extending across the upper ends of said pairs. Metal angle braces 5 suitably secured to the base side beams 1 and to the uprights 3 fasten the same together. Similar braces 6 suitably connected to the uprights 3 and to the upper cross beams 4 fasten said uprights and beams together. A pair of end upright supports 7 in the longitudinal center of the scaffold frame extend between the end cross beams 2 and the upper cross beams 4 and are suitably fastened thereto. End pairs of guide posts 8 arise from the base side beams 1 alongside the end pairs of uprights 3 between the same and closely adjacent thereto. Metal angle braces 9 and plates 10 fasten the posts 7 at the lower ends thereof to the base side beams 1.

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The described scaffold frame serves as a support for a skeleton lift 11 for elevating the material and which will now be described in detail.

The lift 11 comprises end pairs of vertically disposed, platform carrying uprights 12 fitting between the end pairs of posts 8 co-planar therewith. A skeleton platform surmounts the uprights 12 and which comprises end cross beams 13 extending across the tops of the uprights 12 and suitably connecting the same together in pairs, and longitudinal bars 14, preferably triangular in cross-section, and mounted in the tops of the cross beams 13 with ends extending beyond the upper cross beams 4 for a purpose presently apparent.

U-shaped guide members 15 are suitably fixed to the upper ends of the guide posts 8 with the uprights 12 slidably extended therethrough. Similar guide members 16 are suitably fixed to the lower ends of the uprights 12 to slidably fit the guide posts 8. Thus, the uprights 12 are slidably confined for vertical adjustment between the end pairs of guide posts 8 with a working clearance between the same and said pairs of guide posts.

Hoisting means for the described lift 11 is provided as follows. A horizontal shaft 17 extends through the supports 7 with the ends thereof suitably journalled in said supports. A hand crank is fixed on one end of the shaft 17, and a ratchet wheel 19 dogged by a pawl 20 suitably pivoted, as at 21, on one support 17 for swinging into release position. A pair of reels 22 are fixed upon the shaft 17 in the planes of the pairs of uprights 12. Pairs of bands 23, of any suitable material, are fixed in any desired manner at corresponding ends thereof to the reels 22 for winding thereon in pairs by rotation of said reels in one direction, clockwise as viewed in Figure 1. The pairs of bands 23 are trained upwardly over pairs of idler sheaves 24 mounted between the pairs of uprights 12 on the cross beams 4. From the sheaves 24 the pairs of bands 23 are trained downwardly, to pairs of idler sheaves, as at 25, rotatably mounted in the guide members 16 beneath the pairs of uprights 12. From the pairs of sheaves 25 the pairs of bands 23 are trained upwardly between the pairs of uprights 12 and the pairs of guide posts 8 in longitudinal grooves, as at 26, in said uprights, and with terminal ends, as best shown at 27 in Figure 5, suitably fixed to bolts 27 extending crosswise in the upper ends of the posts 8 and through notches 28 in said ends. The bolts 28 are rotatable and provided with wrench heads

29, and nuts 30 for locking the same to the posts 8 against rotation.

Pairs of platform planks 31 are provided for attachment to the end pairs of posts 8 at opposite sides of the described scaffold frame and at different levels. For attaching the planks 31, pairs of apertured hanger members 32, of scrap iron, are suitably attached to said planks to extend upwardly from one longitudinal edge of the planks, said members 32 being spaced apart in each pair in correspondence with the spacing of the posts 8 at the sides of the scaffold frame. Pairs of hooks 33, 34 are provided on the posts 8 at different levels in each pair, and over which the pairs of members 32 may be placed to selectively attach a pair of planks to said posts 8 at different levels on each side of the scaffold frame.

Each plank 31 is provided with corner legs including a pair of long legs 35 at the ends thereof for supporting the plank when attached to the hooks 33 at the higher level, and a short pair 36 at the ends of the plank for supporting said plank when the same is attached to the hooks 33 at the lower level. The pairs of legs 35, 36 are hinged to said planks 31, as at 37, to be folded upwardly and inwardly when not in use flat against the bottoms of the planks. Suitable pivoted catches 38 are provided on the planks 31 for swinging across the legs 35, 36 to hold the same folded in pairs.

Describing now the use and operation of my invention, with the scaffold arranged in a room, or the like, and the described hoisting means operated, in a manner which will be clear, to unwind the pairs of bands 23, the platform of the lift 11 is lowered onto the cross beams 4. With the planks 31 attached, at the desired level, and supported by the appropriate pairs of legs 35, or 36, as the case may be, a panel of the sheet material, not shown, is centered on the platform of the lift 11 by a workman standing on one of the planks 31. By operating the hand crank 18, in the proper direction, the reels 22 may be rotated to wind up the pairs of bands 23 to hoist the lift 11 until the sheet material is elevated into the proper position for nailing or otherwise securing in place. In the operation of securing the panel in place, the planks 31 may be arranged at selected levels and used selectively by the workman as required. The pawl 20 holds the described hoisting mechanism in inoperative position while the panel is being secured in place and may be released to permit lowering of the lift 11 for reloading with another panel, it being understood that said lift 11 descends under the influence of gravity. The described scaffold frame is designed to be of a width suitable for moving the same through doorways, when the planks 31 are detached, so that said scaffold

frame may be moved from room to room. The bolts 27 may be rotated at any time, with the nuts 30 loose, to wind up the bands 23 so as to take up stretch therein and thereby even up the lift 11, after which said bolts may be clamped to the posts 8 by tightening the nuts 30 and thus set in adjusted position suitable for the purpose required.

The foregoing will, it is believed, suffice to impart a clear understanding of my invention without further explanation.

Manifestly, the invention, as described, is susceptible of modification without departing from the inventive concept, and right is herein reserved to such modifications as fall within the scope of the appended claim.

I claim as my invention:

In a scaffold for use in applying wallboard panels to ceilings, a frame structure including side base beams connected together parallel, frame posts upstanding from said beams in pairs with cross beams connecting the upper ends of the posts in pairs, guide posts upstanding from said base beams in pairs intermediate the pairs of frame posts and alongside the same and braced by said frame posts against outward swinging, a lift comprising pairs of uprights interposed between the guide posts of the pairs and between said cross beams and vertically slidable alongside said guide posts, a skeleton platform carried on said uprights with cross bars normally resting on top of said guide posts and longitudinal bars normally resting on said cross beams, and hoisting means for said lift mounted in said frame and including pulleys on said cross beams and cables trained upwardly over said pulleys with ends connected to the tops of said guide posts, said cables being trained under the lower ends of said uprights and extending upwardly between said uprights and guide posts, said uprights being provided with longitudinal cable accommodating grooves therein.

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