Jan. 15, 1952 F. L. O. CRANFORD 2,582,528

QUICK-CHANGE CASING STABBING BOARD

Filed Aug. 29, 1947 2 SHEETS—SHEET 1

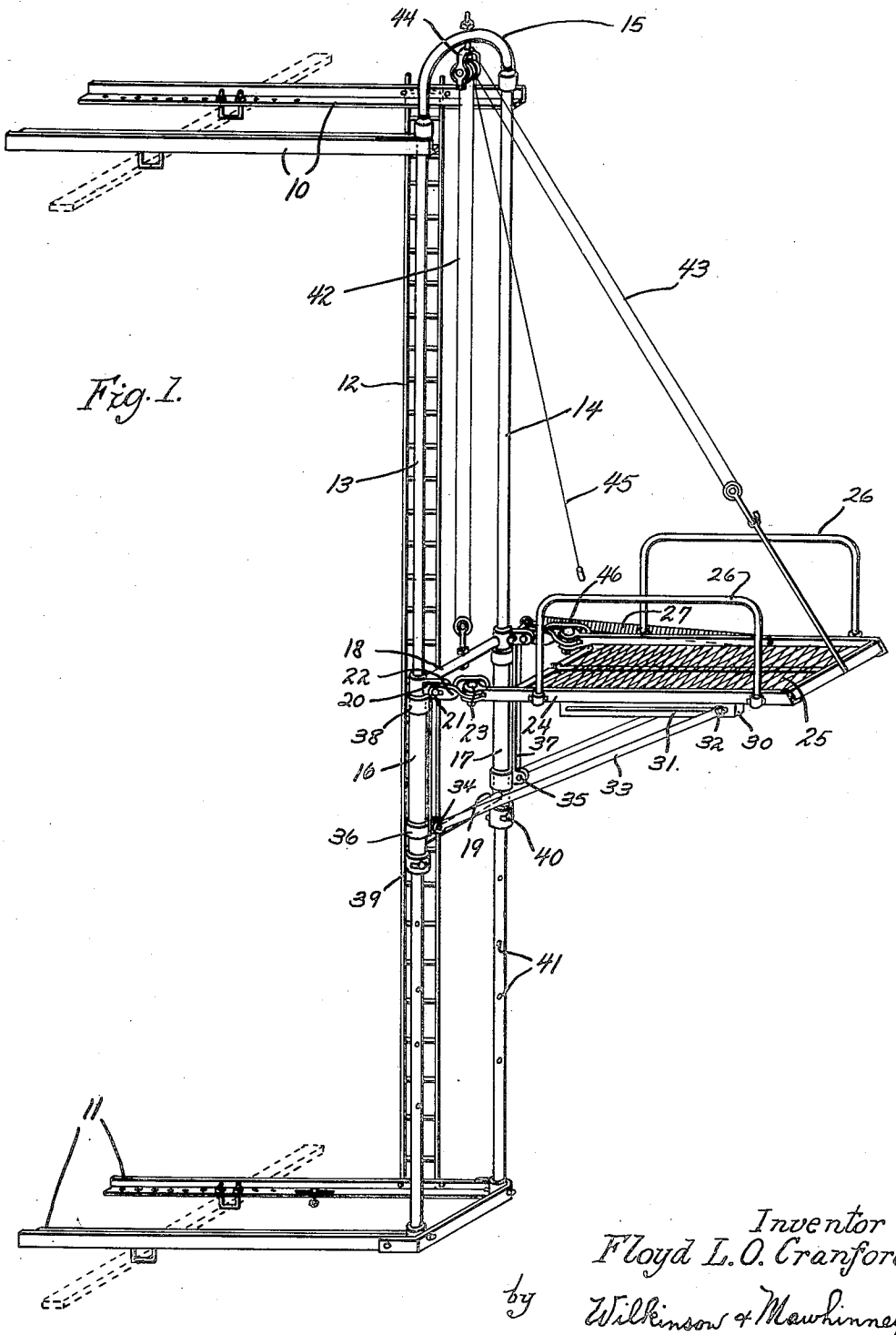


Fig. 1.

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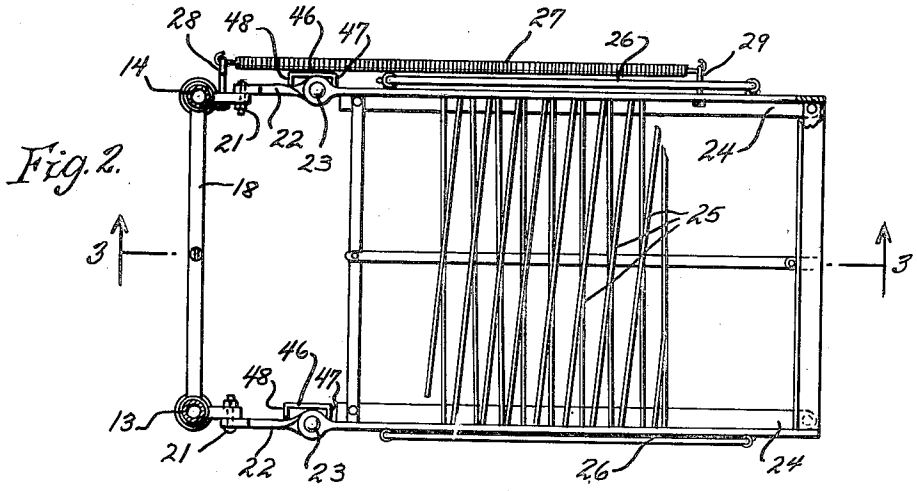


Fig. 2.

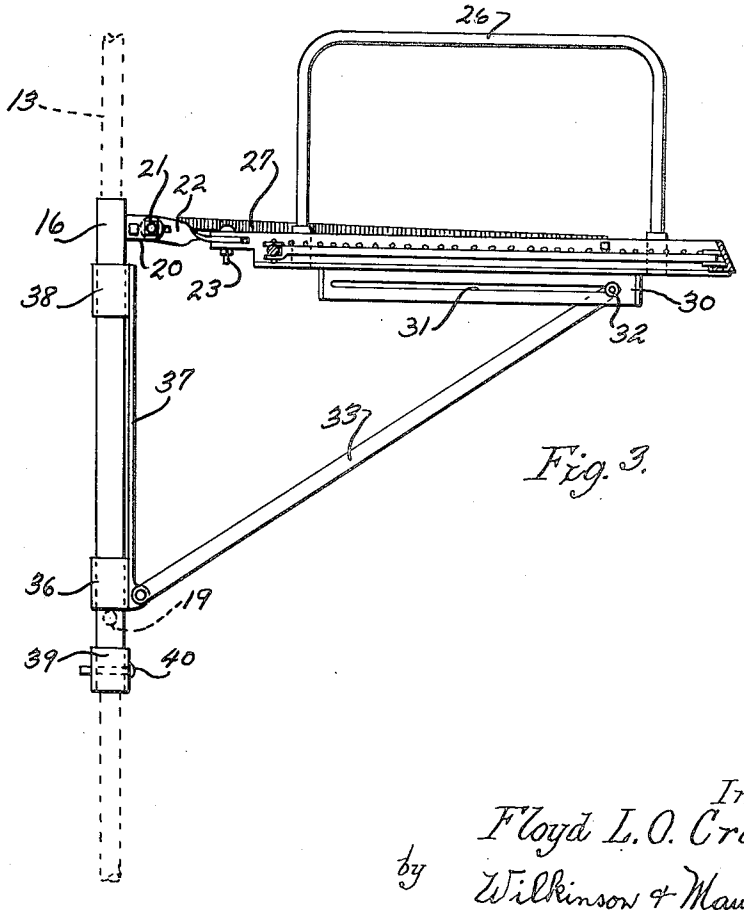


Fig. 3.

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UNITED STATES PATENT OFFICE

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QUICK-CHANGE CASING STABBING BOARD

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Application August 29, 1947, Serial No. 771,199

3 Claims. (Cl. 304—29)

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The present invention relates to improvements in quick change casing stabbing boards and has for an object to provide an improved platform or stabbing board which introduces a new and greater safety factor in the running of casing and other pipe during oil well drilling operations.

Another object of the invention is to provide an improved adjustable arrangement whereby the board may be raised and lowered, whereby the same may fold up in a vertical manner, and, thirdly, in which the board is capable of a sidewise floating movement.

A further object of the invention is to provide an improved traveling support for the board which will admit of the three movements above described, the construction being simple, strong, and inexpensive.

With the foregoing and other objects in view, the invention will be more fully described hereinafter and more particularly pointed out in the appended claims.

In the drawings, in which like parts are denoted by the same reference characters throughout the several views,

Figure 1 is a perspective view of an improved quick change casing stabbing board as constructed in accordance with the present invention;

Figure 2 is a top plan view of the same with parts shown in section; and

Figure 3 is a fragmentary side elevational view with parts of the supporting standards broken away.

Referring more particularly to the drawings, 10 and 11 designate the upper and lower derrick rails or any convenient supporting construction between which a ladder 12 extends.

Carried by the derrick frame are the spaced and parallel vertical pipe standards 13 and 14 connected across their upper ends by an arch 15. On these standards are vertically sliding sleeves 16 and 17 connected laterally by horizontal crossbars 18 and 19.

Lugs 20 projecting outwardly from the upper portions of the sleeves 16 and 17 carry pivots 21 with horizontal axes on which may swing in vertical planes the connecting pieces 22. Such connecting pieces 22 also carry pivots 23 with vertical axes about which rotate the side rails 24 of the platform or board. Such side rails 24 preferably support a grill floor 25 and side rails 26. The grill work and side rails form a platform structure which permits lateral distortion of the same about the pivots 23.

A spring 27 has one end connected to a lug 28

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affixed to one of the lugs 20, while the other end of the spring is attached to a lug 29 projecting laterally from one of the side rails 24.

Guides 30 having slots 31 are affixed to the undersides of the rails 24 in position to slidingly receive pins 32 upon the upper ends of the diagonal braces 33. The lower ends of the braces are secured by pins 34 to lugs 35 on collars 36 which may be rotatably mounted about the sleeves 16 and 17. Connecting rods 37 connect the collars 36 with upper collars 38 also rotatably mounted about the sleeves 16 and 17.

Below the rotatable collars 36 are fixed collars 39 welded or otherwise secured to the lower end portions of the sleeves 16 and 17, such collars having removable pins 40 passing therethrough which are also adapted to pass through selected holes 41 in the pipe standards 13 and 14.

A block and tackle 42 connects with the upper cross-bar 18 while a similar block and tackle 43 connects with the free edge of the platform or board. Both tackles extend to a head pulley block 44 carried swivelly in the arch 15. An operating cable 45 for the blocks and tackles 42 and 43 is made accessible to the operator on the platform.

In the use of the device the platform will slide up and down by pulling upon the operating cable 45. This will cause the sleeves 16 and 17 to slide up or down on the pipe standards 13 and 14. It will be understood that the pins 40 are removed from the perforations 41 and from the collars 39 before this vertical adjustment is begun. When the board or platform is adjusted to required elevation, the pins 40 are replaced through the collars 39 and the holes 41 with which the collars register at that time and the adjustment is maintained. By this means the platform may be adjusted to the height of the casing.

A satisfactory apparatus has been built having a twenty-foot adjustable range up and down the derrick which allows for the handling of various lengths of casing and tubing which are used in wells.

Moreover, the platform or board may swing from side to side about the vertical pivots 23 and it may also tip upwardly about the horizontal pivots 21 so that in case the moving block, hook and elevators which are raising the pipe in place should strike the stabbing board from either the side or underneath it will not be broken or knocked out of the derrick but rather will yield to the impact and will move sideways or upwards as the force may be applied; thus allowing the block and hook to move on up; and hence will

prevent the man standing on the board from being thrown out of the derrick.

The floating of the board from side to side is controlled by metal stops **46** which may be associated with the vertical pivots **23**. Such stops allow the board a limited swinging movement, after which it is returned to its original operating position by the action of the spring **27**.

During the time that this board is not in use the block and tackle arrangement allows it to be pulled up out of the way of drilling operations.

In most drilling operations conducted at the present time a long wooden board is placed on the girts of the derrick and used as a stabbing board. It is not only unsafe but also must be moved up and down the derrick to handle the various lengths of pipe. The moving of such wooden board is a work attended with considerable risk. Such movement also requires excessive valuable time, whereas the improved stabbing board according to the present invention can very quickly be moved up or down by simply pulling the safety pins **40** and moving to the desired height with the cat line. The safety pins **40** are then replaced and the derrick man assumes his position on a safe platform with iron guard railing **26** to do his work more efficiently and without added risk to his life.

The stops **46** are of a peculiar form in that at one end each stop has a substantially right-angularly attaching flange **47** welded or otherwise secured to a side portion of the side rail **24** in order that the main intermediate shank portion **46** of the stop shall be off-set about the vertical pivots **23** and whereby the angularly turned abutment nose **48** on the free other end of the shank **46** may be enabled to abut against a side wall portion of the respective connecting piece **22**. It will be noted from Figure 2 that two stops are provided, one associated with each side rail of the platform and that both stops are to the same side, namely to the spring **27** side of the platform thus preventing the stabbing board from swinging about the vertical pivots **23** to the side next to the spring **27**. The pipe always comes from the opposite side so that any deflection of the side board about the pivots **23** will take place in a direction away from and tending to distend the spring **27**; in which operation the noses **48** of the stops will move away from the connecting pieces **22** and allow of this sidewise horizontal movement of the platform. When the disturbing force is removed the spring **27** will draw the platform horizontally back into place as limited by the impingement of the noses **48** against the connecting pieces **22**. In some instances a single stop may suffice. The spring **27** and the stops are so correlated that the spring brings the stops to rest in the correct operative position of the platform.

When the platform swings horizontally the braces **33** swing therewith occasioning the rotation of the collars **36** upon the sleeves **16** and **17**. The collars **36** may be rotatably supported upon the lower cross-bar **19**.

While I have disclosed herein the best form of the invention known to me at the present time, I desire it to be understood that I reserve the right to make changes and modifications in the herein described embodiment of the invention provided such changes fall within the scope of the following claims.

What is claimed is:

1. A quick change casing stabbing board having vertical standards, sleeves slidable axially over said standards, a platform, pivot means carried by said sleeves for supporting said platform, said pivot means having horizontal axes whereby said platform is adapted to be swung vertically about said pivot, a second pivot means comprising connecting pieces attached to said first mentioned pivot and having vertical axes for supporting said platform for lateral movement.

2. A quick casing stabbing board as claimed in claim 1 in which the platform has slotted guides depending therefrom, diagonal braces having pins at their upper ends slidable in the slotted guides, collars rotatably mounted upon the sleeves and pivotally connected with the lower ends of said braces, means comprising a pulley block and tackle for raising and lowering said platform, and a control cable from said pulley block to said platform.

3. A quick casing stabbing board as claimed in claim 1 characterized by the provision of stops for limiting lateral swinging movement of the platform, and a spring to restore the platform to operating position.

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