

Nov. 16, 1926.

1,607,574

J. J. SPURGEON

TUBING BOARD

Filed Feb. 24, 1926

2 Sheets-Sheet 1

Fig. 1.

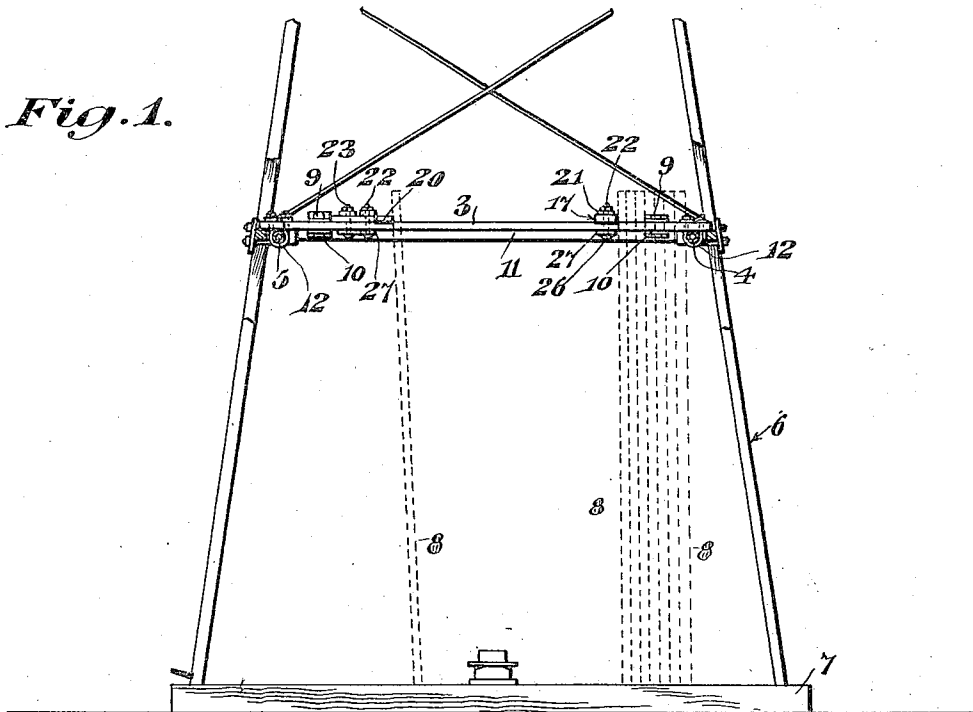
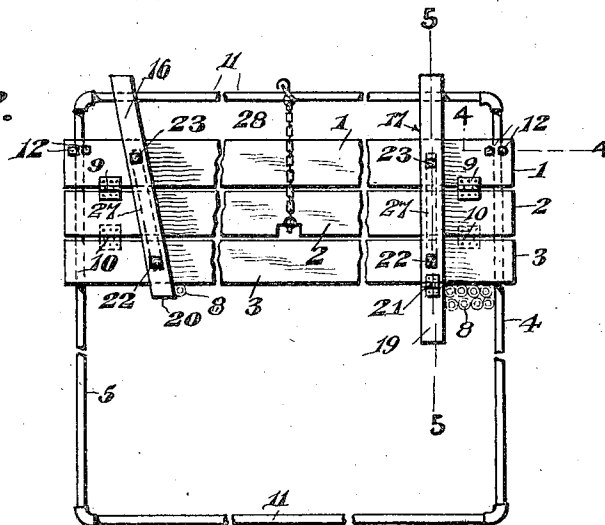


Fig. 2.



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Fig. 3.

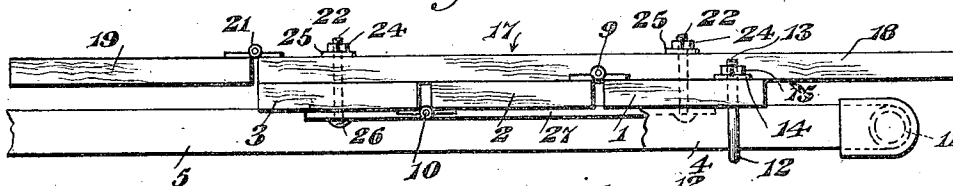


Fig. 4.

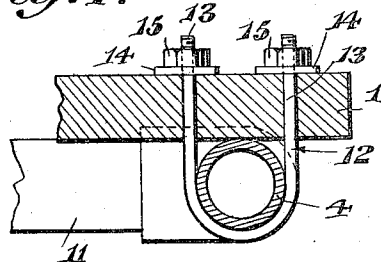


Fig. 6.

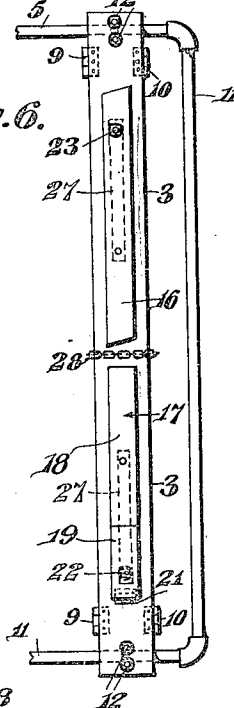


Fig. 5.

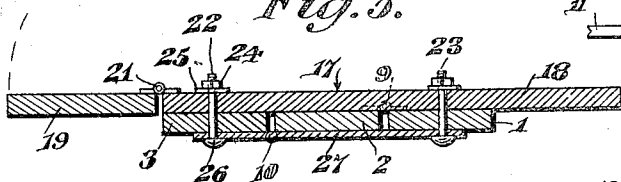
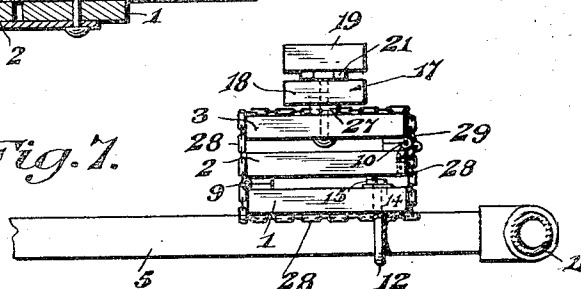


Fig. 7.



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TUBING BOARD.

Application filed February 24, 1926. Serial No. 90,402.

This invention relates to tubing boards for use in connection with oil well riggings, and has for its object to provide, in a manner as hereinafter set forth, a board of such class for arrangement within an oil well derrick to facilitate the handling of oil well tubings when inserting and removing the same to and from the well.

A further object of the invention is to provide, in a manner as hereinafter set forth, a tubing board for the purpose referred to adapted to be secured within an oil well derrick and constructed in a manner whereby when not in use it can be folded and secured in a compact manner to overcome the obstructing of the interior of the derrick.

A further object of the invention is to provide, in a manner as hereinafter set forth, a tubing board for the purpose referred to having means for maintaining in an upright position, within a derrick, tubing to facilitate the handling thereof.

A further object of the invention is to provide, in a manner as hereinafter set forth, a tubing board for the purpose referred to having means for maintaining a tubing in an upright position to facilitate the latching or the unlatching of the tubing to and from the elevating and lowering means therefor.

Further objects of the invention are to provide, in a manner as hereinafter referred to and for the purpose set forth, a tubing board which is simple in its construction and arrangement, strong, durable, foldable, thoroughly efficient in its use, conveniently extended to facilitate the handling of oil well tubing, readily installed with respect to a derrick and comparatively inexpensive to manufacture.

With the foregoing and other objects in view the invention consists of the novel construction, combination and arrangement of parts as hereinafter more specifically described, and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which fall within the scope of the claims hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:—

Figure 1 is a fragmentary view in elevation of an oil well derrick showing the

adaptation therewith of a tubing board in accordance with this invention and further illustrating tubing in dotted lines.

Figure 2 is a fragmentary view, in plan, illustrating the adaptation of a tubing board, in accordance with this invention, with respect to a derrick.

Figure 3 is an end view of a board when extended and further illustrating a fragmentary portion of the derrick.

Figure 4 is a section on line 4—4 Figure 2.

Figure 5 is a section on line 5—5 Figure 2.

Figure 6 is a top plan view illustrating the board folded.

Figure 7 is an end view illustrating the board in folded position.

A tubing board, in accordance with this invention, is of the flexible type, and as shown comprises an outer, an intermediate and an inner section, 1, 2, and 3 respectively and each section is formed from a plank of appropriate width and thickness and of a length to be seated upon a pair of opposed side girths 4, 5, of a derrick 6. The planks may be constructed of wood or metal, preferably wood. The board is arranged a substantial distance above the bottom 7 of the derrick 6, so that the upper ends of the tubing section 8 can be conveniently handled for the purpose of latching and unlatching to a tubing section the elevating or lowering means therefor.

The sections of the board are hinged together, to provide for the section 2 folding upon the section 1 and the section 3 folding upon the section 2. The upper face of the section 1 is hinged to the upper face of the section 2, by a plurality of hinges 9 and the lower face of the section 2 is hinged to the lower face of the section 3 by a plurality of hinges 10. The section 1 is fixedly secured to the girths 4, 5 in proximity to one of the other girths 11 of the derrick and for such purpose a pair of yokes 12 are employed. The base of one of the yokes extends around the girth 4 and the base of the other of the yokes extends around the girth 5. The arms of each yoke extend upwardly through the section 1, in proximity to an end thereof, as indicated at 13, Figure 4. The arms of each yoke are of a length to extend above the upper face of the section 1 and carry on their upper ends washers 14 and clamping nuts 15 and by this arrangement the

ends of the section 1 are fixedly secured or clamped to the girths 4, 5. The yokes 12, in connection with the nuts 15, also provide what may be termed a detachable securing means for the section 1, as when the nuts 15 and the washers 14 are removed, the section 1 can be disconnected from the girths 4, 5. The yokes 12 are positioned in close proximity to the outer side edge of the section 1.

The board includes a pair of holder bars for retaining the tubing sections in upright position to facilitate the handling thereof. One of the holder bars is indicated generally at 16 and the other at 17. The bars when in active position extend across the sections of the board when the latter is in extended position, and the bars further project beyond the outer side and inner side of the board. The bar 16 is disposed at an inclination and formed from a single length of material. The bar 17 is disposed transversely with respect to the board and is formed of a stationary and a hinged section 18, 19, respectively and the hinged section is adapted, when the bar 17 is in inactive position to be folded upon the stationary section of such bar. The section 18 is of materially greater length than the section 19 and is arranged at the outer end of the latter, as well as being hinged thereto, as at 21 so that the section 19 can be folded upon the upper face of the section 18. The inner end of the bar 16 projects a substantial distance, as at 20 from the inner side of the board when the latter is in active or extended position. The section 19 of the bar 17 is adapted to hold in upright position a plurality of tubing sections positioned between said section 19 and the girth 4. The projecting inner end of the bar 16 is adapted to hold in an upright position a single tubing section at the proper point to facilitate the latching and unlatching of the elevating and lowering mechanism or device for the tubing section. The bar 17 extends across the board in proximity to that end thereof which is supported on the girth 4 and the bar 16 is arranged in proximity to the girth 5, when the board is extended, and is disposed at an inward inclination so that the tubing section held by the inner end 20 of the bar 16 will be positioned a substantial distance from the girth 5 so that the tubing section can be properly handled.

The bar 16 as well as the bar 17 is secured to the sections 1 and 3 of the board, and for such purpose a pair of bolts are employed which extend upwardly through the sections 1 and 3 and carry on their upper end clamping nuts and the washers. The bolts which secure a bar to the sections 1 and 3 of the board are indicated at 22, 23, Figure 5 and the nuts and washers are indicated at 24, 25 respectively in Figure 5. The heads of the

bolts are indicated at 26 and which act as means for securing bracing elements 27 against the lower faces of the sections of the board when the latter is extended. The bolt 23, in connection with a nut 24 mounted on the top thereof, provides means for pivotally connecting a bar 16 or a bar 17 to the section 1. This arrangement is provided so that the bars 16 and 17 can be swung to the position shown in Figure 6, when the bolts 22 are removed from securing position with respect to the bars 16 and 17 and section 3 of the board. When the board is extended, the bolts 22 and 23 fixedly secure the bars 16 and 17 upon the upper faces of the sections of the board. But when it is desired to fold the board, the bolts 22 are removed and the bars folded upon the upper face of the section. When the bolts 22 are removed, the reinforcing or bracing members 27 are swung against the lower face of the section 1, as indicated in dotted lines in Figure 6. After the bolts 22 are removed, the section 2 is folded upon the upper face of the section 1 and the section 3 is folded upon the section 2, after which the sections are detachably secured together by a flexible member 28, in the form of a chain which is connected to the section 2 and is extended around the folded sections, in a manner as shown in Figure 7. The free end of the member 28 is provided with a hook 29 which engages in one of the links of the chain whereby the board when folded in a compact position is maintained therein. The bars 16 and 17, when in active position, extend beyond the girth 11 of the derrick. The board when extended is of such width as to enable sufficient room within the derrick or in other words the width of the board when extended is materially less than the width and breadth of the derrick thereby not interfering with any operations at the bottom of the derrick or interfering with the elevating and lowering means for the tubing sections. When the board is extended, the operator stands thereon for the purpose of conveniently handling the tubing sections, that is to say it permits of the tubing sections being handled expeditiously and conveniently from the upper end thereof.

It is thought the many advantages of a tubing board, in accordance with this invention, can be readily understood, and although the preferred embodiment of the invention is as illustrated and described, yet it is to be understood that changes in the details of construction can be had which will fall within the scope of the invention as claimed.

What I claim is:—

1. A tubing board for positioning within an oil well derrick comprising a foldable body portion formed with a plurality of hinged sections of a length to be independ-

ently supported upon a pair of opposed girths of the derrick when the body portion is extended, means for securing one of said sections to said girths, and a pair of foldable holding bars connected to one of said sections and of a length to project beyond the inner side of the body portion when the latter and the bars are extended.

2. A tubing board for positioning within an oil well derrick comprising a foldable body portion formed with a plurality of hinged sections of a length to be independently supported upon a pair of opposed girths of the derrick when the body portion is extended, means for securing one of said sections to said girths, and a pair of foldable holding bars connected to one of said sections and of a length to project beyond the inner side of the body portion when the latter and the bars are extended, and means for securing the bars to another of said sections to maintain the bars and the sections in extended position.

3. A tubing board for positioning within an oil well derrick comprising a foldable body portion formed with a plurality of hinged sections of a length to be independently supported upon a pair of opposed girths of the derrick when the body portion is extended, means for securing one of said sections to said girths, a pair of foldable holding bars connected to one of said sections and of a length to project beyond the inner side of the body portion when the latter and the bars are extended, means for securing the bars to another of said sections to maintain the bars and sections in extended position, and reinforcing members for said bars secured in position by said means and capable of being folded against one of the sections when the body portion is folded.

4. A tubing board for positioning within an oil well derrick comprising a foldable body portion formed with a plurality of hinged sections of a length to be independently supported upon a pair of opposed girths of the derrick when the body portion is extended, means for securing one of said sections to said girths, a pair of foldable holding bars connected to one of said sections and of a length to project beyond the inner side of the body portion when the latter and the bars are extended, means for securing the bars to another of said sections to maintain the bars and sections in extended position, reinforcing members for said bars secured in position by said means and capable of being folded against one of the sections when the body portion is folded, and means for detachably securing the sections of the body portion in folded position.

5. A tubing board for positioning within an oil well derrick comprising a foldable body portion formed with a plurality of hinged sections of a length to be independ-

ently supported upon a pair of opposed girths of the derrick when the body portion is extended, means for securing one of said sections to said girths, a pair of foldable holding bars connected to one of said sections and of a length to project beyond the inner side of the body portion when the latter and the bars are extended, and one of said bars including a hinged section projecting forwardly of the inner side of the body portion when the latter is extended.

6. A tubing board for positioning within an oil well derrick comprising a sectional foldable body portion of a length to be supported upon a pair of opposed girths of the derrick, means for securing one section of the body portion to said girths, and tubing section holders projecting from the inner side of said body portion when in an active position, and means associated with said holders and body portion to permit of the holders being folded upon one section of the body portion and for fixedly securing the holders in active position.

7. A tubing board for positioning within an oil well derrick comprising a sectional foldable body portion of a length to be supported upon a pair of opposed girths of the derrick, means for securing one section of the body portion to said girths, tubing section holders projecting from the inner side of said body portion when in an active position, means associated with said holders and body portion to permit of the holders being folded upon one section of the body portion and for fixedly securing the holders in active position, and means for detachably securing the sections of the body portion in folded position.

8. A tubing board for positioning within an oil well derrick comprising a sectional foldable body portion of a length to be supported upon a pair of opposed girths of the derrick, means for securing one section of the body portion to said girths, tubing section holders projecting from the inner side of said body portion when in an active position, means associated with said holders and body portion to permit of the holders being folded upon one section of the body portion and for fixedly securing the holders in active position, and reinforcing members secured to said body portion by said means, said means fixedly securing said reinforcing members to the body portion when the latter is extended and further permitting of said members to be folded against one of the sections of the body portion when the sections of the latter are folded.

9. A tubing board for positioning within an oil well derrick comprising a sectional foldable body portion of a length to be supported upon a pair of opposed girths of the derrick, means for securing one section of the body portion to said girths, tubing sec-

tion holders projecting from the inner side of said body portion when in an active position, means associated with said holders and body portion to permit of the holders being
5 folded upon one section of the body portion and for fixedly securing the holders in active position, reinforcing members secured to said body portion by said means, said means fixedly securing said reinforcing members to
10 the body portion when the latter is extended and further permitting of said members to be folded against one of the sections of the body portion when the sections of the latter are folded, and means for detachably securing the sections of the body portion in super-
15 posed position when the body portion is folded.

In testimony whereof, I affix my signature hereto.

JESSE J. SPURGEON.