

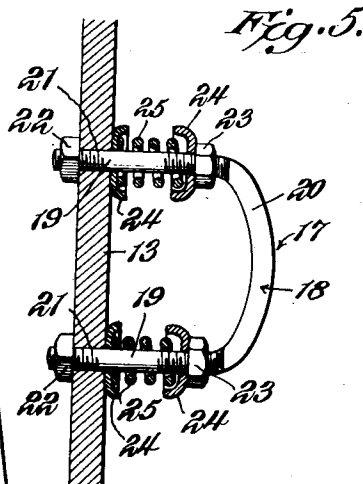
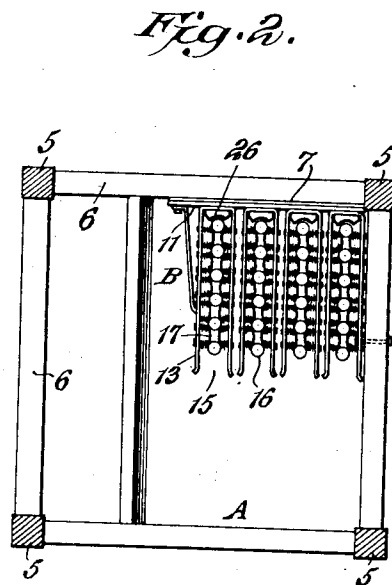
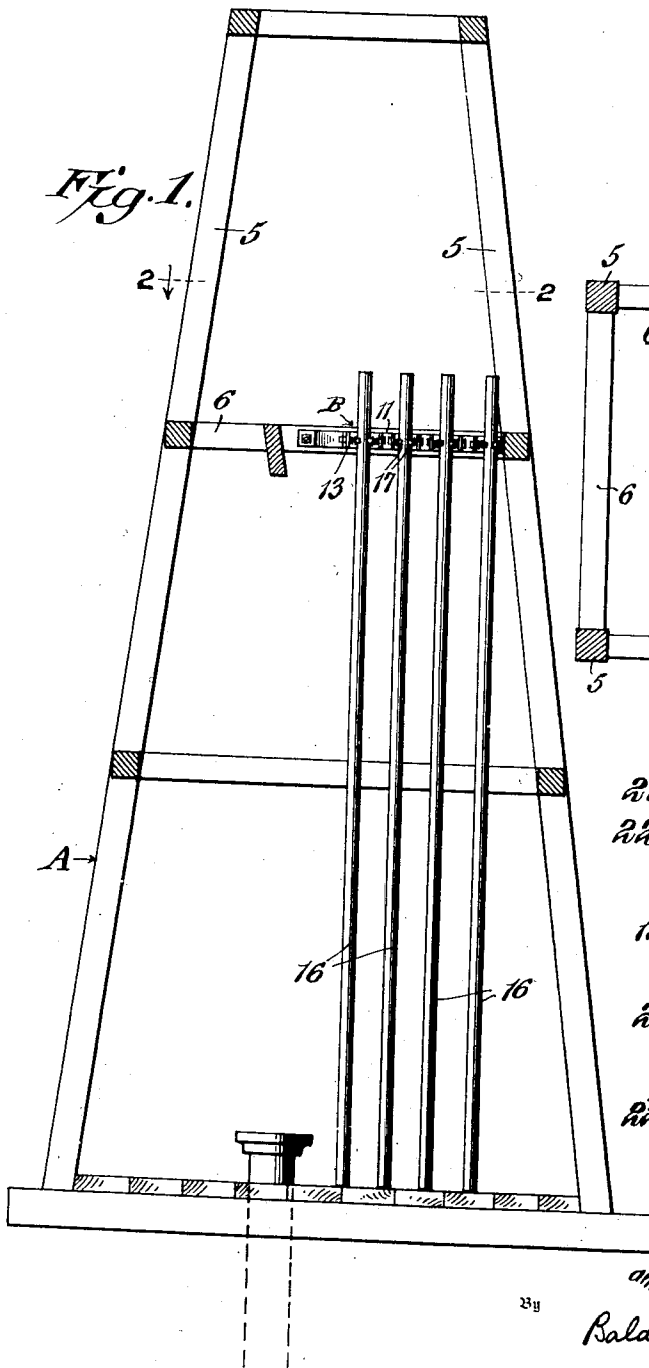
June 25, 1929.

Q. C. WEBB ET AL
TUBE RACK FOR DERRICKS

1,718,395

Filed May 1, 1928

2 Sheets-Sheet 1



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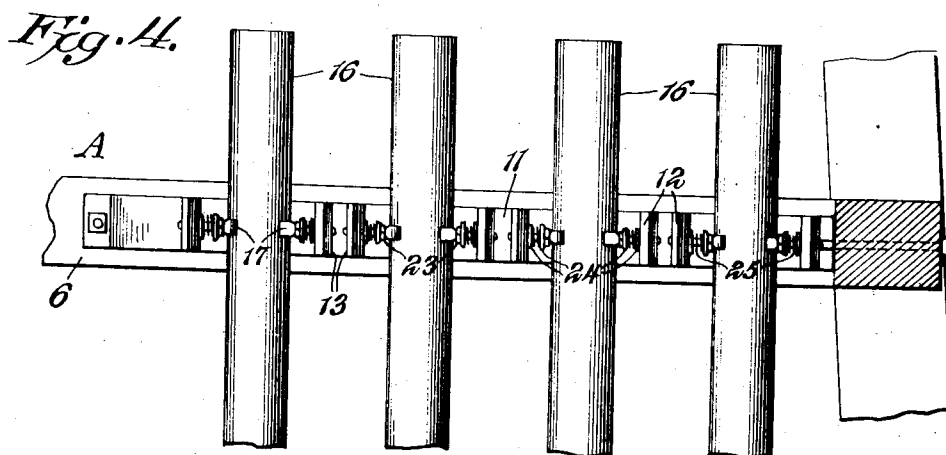
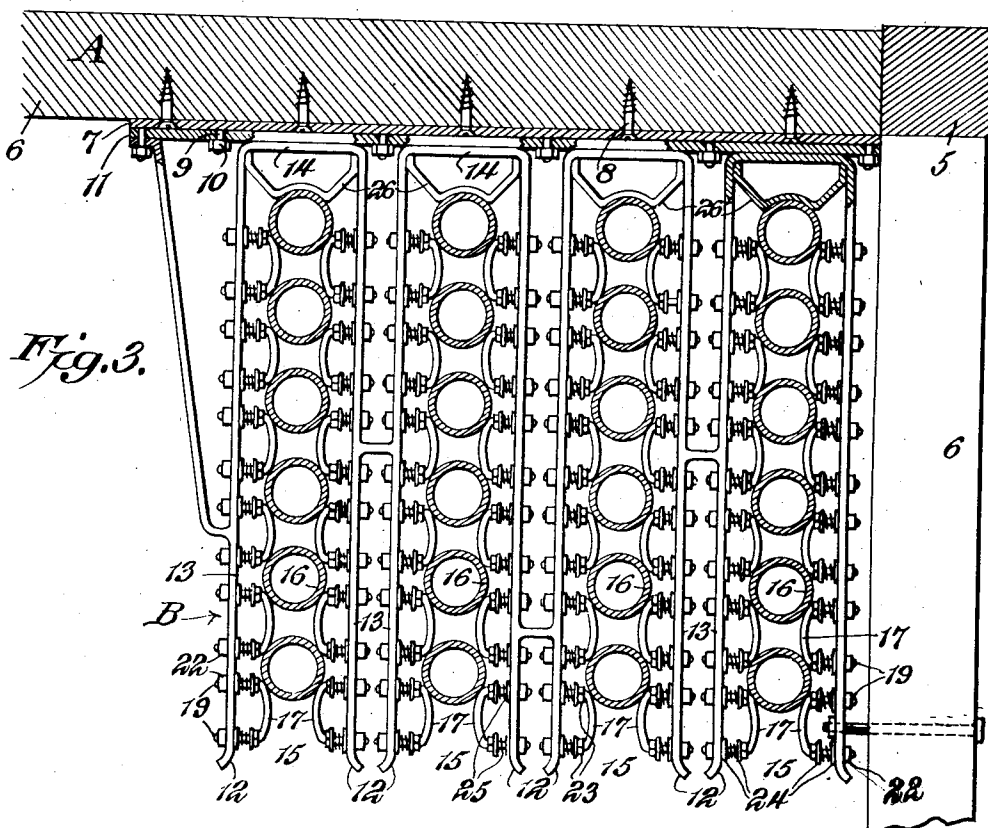
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UNITED STATES PATENT OFFICE.

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TUBE RACK FOR DERRICKS.

Application filed May 1, 1928. Serial No. 274,317.

Our invention relates to tube racks for derricks, although it will be understood that other devices such as sucker rods may be retained by the rack if desired.

5 Heretofore the practice has been, in pulling tubes, to stack the tubes on a derrick against the finger board, and, after one row of tubes has been so stacked, other tubes are stacked on the first row of tubes. The stacking of tubes in this manner is dangerous in 10 that the tubes are liable to slip off and injure the operator.

It is therefore the principal object of our invention to attach a rack to the derrick 15 frame for receiving the pulled tubes and support the same while resting on a derrick floor without danger of the tubes accidentally falling and thereby injuring the operator.

20 Another object lies in the provision of the rack for the purpose described which is constructed so as to permit the easy withdrawal of the tubes whenever desired.

In the accompanying drawings, which illustrate one form of my invention,

25 Figure 1 is a vertical sectional view of a derrick showing the application of our invention.

Figure 2 is a horizontal sectional view 30 taken on the line 2-2 of Figure 1.

Figure 3 is an enlarged plan view of the rack showing the manner of supporting the same on the derrick, a portion of the derrick and a portion of the rack being shown 35 in section.

Figure 4 is a detailed front elevation of the structure shown in Figure 3, and Figure 5 is an enlarged detail view, particularly in section, showing one of the tube retainers.

40 Referring to the accompanying drawings, A represents a derrick of any preferred construction, which, however, includes the up-rights 5-5 and the cross bar or tubing board 6.

45 Our rack, which is designated as a whole by the reference letter B, is removably attached to the tubing board 6. A supporting plate 7 is secured to the tubing board 6 by screws 8 or other suitable fastening means, and carried by and extending forwardly 50 from the plate 7 is a plurality of bolts 9 having threaded outer ends for receiving clamping nuts 10.

The rack B includes an attaching plate 11 55 which is provided with perforations to re-

ceive the bolts 9. The attaching plate 11 is positioned against the supporting plate 7 and is rigidly secured thereon by the clamping nuts 10. Rigidly secured to the attaching plate 11, either by welding or other suitable means, is a plurality of tube supporting 60 frames 12. Each frame is formed of a strip of flat metal which is bent into U shape to form parallel arms 13-13 and a connection portion 14, which constitutes the attaching 65 end, and an open front end 15. The frames 12 are arranged side by side in horizontal plane so that all of their open ends 15 extend outwardly from the tubing board 6.

The tubes 16 are adapted to be positioned 70 within the several frames 12 with the ends of the tubes resting on the floor of the derrick.

It is desirable to provide the several frames 12 with means for yieldably retaining the 75 tubes against movement and yet permitting the tubes to be readily withdrawn or inserted whenever so desired. To this end we have provided each frame 12 with a plurality of spaced yieldable retainers 17. A series of 80 these retainers is supported on each arm 13 of each frame 12. These retainers are arranged in spaced relation and extend substantially throughout the length of the frame. Furthermore, the retainers of one 85 series are disposed directly opposite the retainers of the other series. Consequently, the several tubes positioned within a given frame 12 will be respectively retained between four retainers, two of the retainers being on one arm 13 and the other two being 90 on the other arm.

Each retainer is preferably formed of the U-bolt 18, which includes parallel arms 19-19 and a curved connecting portion 20. 95 The arms 19 are threaded, and the free ends thereof extend through perforations 21 formed in the associated side arm 13 of the frame. Clamping nuts 22-22 are associated with the projecting ends of the arms 19 to 100 hold the retainer 17 against outward movement. Threaded on the inner ends of the arms 19 are adjustable nuts 23-23, and disposed on each arm 19 adjacent the associated nut 22 is a cup 24. Arranged around each 105 arm 19 between the arm 13 of the frame and the cup 24 is a coil spring 25, which functions to yieldably hold the retainer in its outermost position.

Although we have shown a rack consist- 110

ing of four frames 13, it will be understood that a greater number or a lesser number of frames may be employed if desired, and also that the frames may vary in length so as to support any desired number of tubes.

Located within the arms 13—13 of each frame between the connecting portion and the innermost retainers 17, and rigidly secured to the attaching portion is a curved rest 26 which cooperates with the adjacent pair of retainers to hold the first positioned tube in proper position.

From the foregoing, it will be readily understood that as the operator withdraws the tubes he positions one end thereof on the derrick floor and swings the upper end of the tube into one of the frames 13, the upper end of the tube being forced inwardly from the open end 15 past the several retainers until the upper end of the tube is positioned at the inner end of the frame. The succeeding tubes are then positioned in the same general manner, until all the tubes are positioned within the rack. It will be apparent that the tubes may be readily withdrawn whenever desired, and that these tubes when retained by the rack will be held against accidental displacement and consequently avoid any injury to the operator.

We claim:

1. In a tube rack for derricks, the combination of a frame having parallel arms and an open end for receiving a plurality

of tubes, and a plurality of spaced yieldable tube retainers extending laterally from one arm toward the other.

2. In a tube rack for derricks, the combination of a frame having parallel arms and an open end for receiving a plurality of tubes, and a plurality of spaced yieldable tube retainers extending laterally from each arm toward the other, the retainers on one arm being disposed opposite the retainers on the other arm.

3. In a tube rack for derricks, the combination of a frame having parallel arms and an open end for receiving a plurality of tubes, and a plurality of spaced yieldable tube retainers extending inwardly from one arm, each retainer comprising a U-shaped bolt having spaced arms and a curved connecting portion, the retainer arms having sliding connection with the frame arm, stops on the retainer arms, and springs intermediate the stops and the frame arms.

4. In a tube rack for derricks, the combination of an attaching plate, a plurality of pairs of spaced parallel arms extending from the plate and arranged in a common plane, and yieldable tube retainers supported on each arm of each pair of parallel arms and extending laterally toward the other arm.

In testimony whereof, we have hereunto subscribed our names.

QUINCY C. WEBB.
GEORGE CARLTON.