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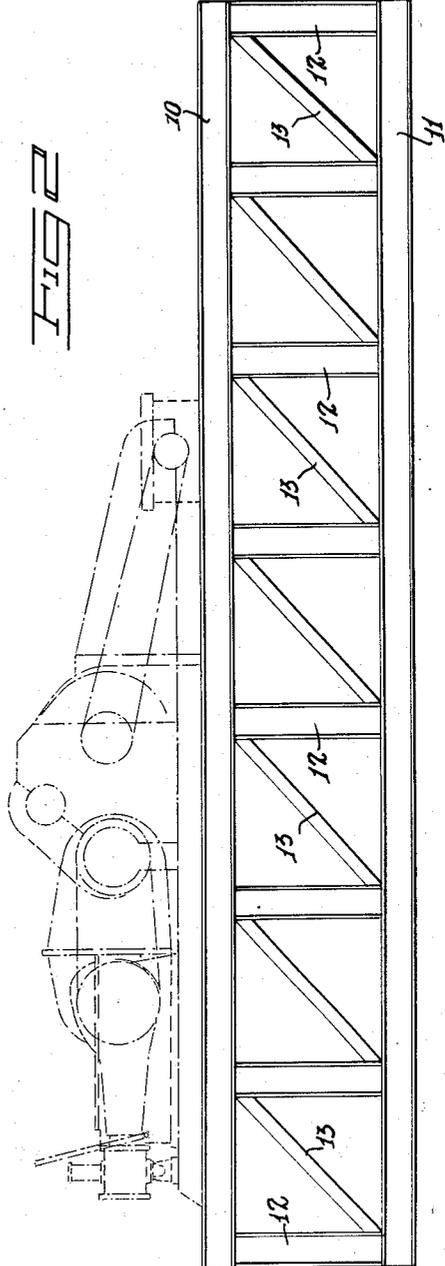
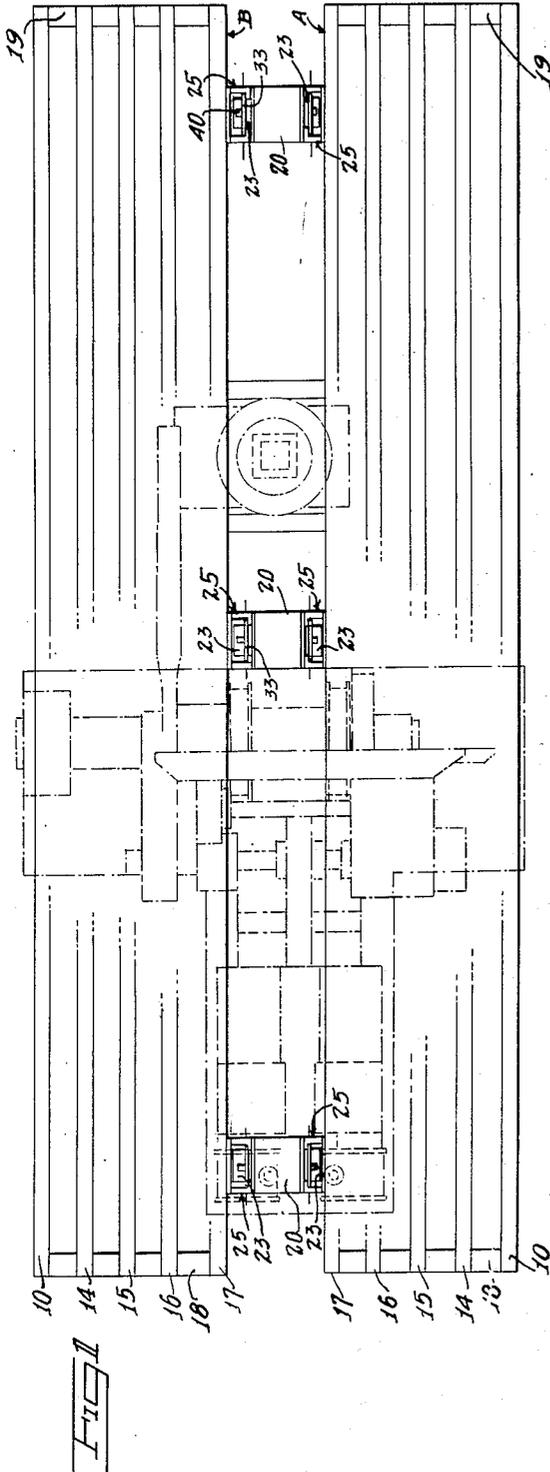
L. A. WHIPPLE, JR

2,664,178

DRILLING RIG BASE

Filed May 13, 1949

2 Sheets-Sheet 1



INVENTOR.  
Louis A. Whipple Jr.  
BY  
Lyon Hysu  
attorneys

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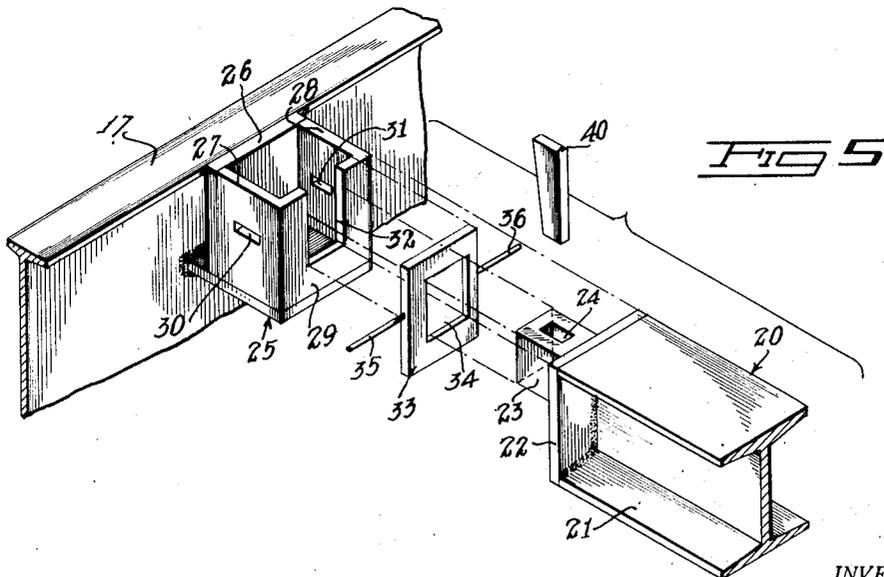
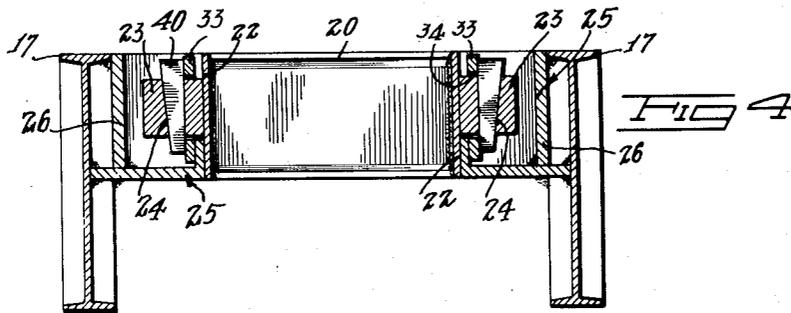
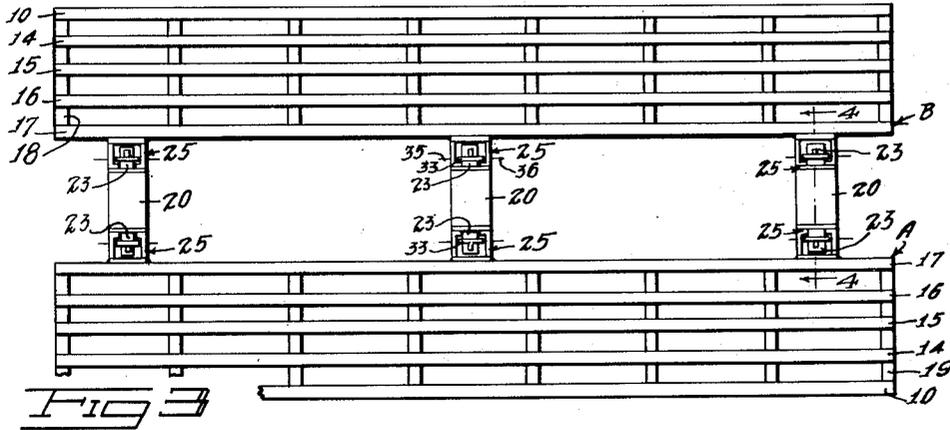
L. A. WHIPPLE, JR

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DRILLING RIG BASE

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2 Sheets-Sheet 2



INVENTOR.  
Louis A. Whipple Jr.  
BY  
Lyon Lyon  
Attorneys

# UNITED STATES PATENT OFFICE

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## DRILLING RIG BASE

Louis A. Whipple, Jr., La Canada, Calif., assignor  
to Rocky Mountain Drilling Company, Los Angeles,  
Calif., a corporation of Wyoming

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3 Claims. (Cl. 189—21)

1

This invention relates to a base for a drilling rig and more particularly to such a base having detachable interlocking connecting members permitting the dismantling of the base for transportation to and from a drilling site.

This invention contemplates a locking or latching mechanism interposed between two structural members to facilitate connecting and disconnecting the members for assembly or disassembly.

Broadly speaking, the invention comprises a pair of structural members built up from I-beam or channel members or the like having suitable cross-braces and lateral braces between which are disposed a plurality of beams adapted for ready connection and disconnection to the structural members by means of the locking mechanism or clamp hereinafter described.

It is, accordingly, one object of this invention to facilitate the erection and dismantling of a movable base for a drilling rig by means of the detachable mechanism of this invention. It is a further object of this invention to provide such a base for a drilling rig provided with a clamping mechanism which maintains the base in a rigid locked condition while being used but which can be quickly and easily detached. These and other objects and advantages of this invention will be apparent from the annexed specification in which:

Figure 1 is a plan view of a base embodying the present invention showing conventional rotary and draw works mounted thereon.

Figure 2 is a side view of the device shown in Figure 1.

Figure 3 is a reduced plan view of the device shown in Figure 1 with the draw works removed.

Figure 4 is a section taken along the line 4—4 of Figure 3.

Figure 5 is an exploded perspective of one of the clamping members.

Referring now more particularly to the drawings, the invention is shown as including a pair of structural members each of which includes a top rail 10, a bottom rail 11, up-standing vertical channels or rails 12 and braces 13. Each structural member also includes a plurality of other top rails 14, 15, 16 and 17. Laterally extending end members 18 and 19 are shown across the top of the structural members and it will be understood that similar bottom lateral members, not shown, are provided. Thus, substantially, a pair of open framework boxes, indicated generally at A and B, are built up.

It will be understood by those skilled in the

2

art that these open framework boxes may be constructed in any desired manner and from any materials readily available.

The invention comprehends that these structural members A and B will be transported to and from a drilling site as a unit and attached by the mechanism hereinafter described. Between the members A and B, there extends a plurality of cross-beams 20; these cross-beams are formed as shown particularly in Figures 4 and 5 of I-beams 21 having plates 22 annexed at each end thereof on which plate 22 is an extension 23, generally rectangular in form and having a slot 24 extending vertically therethrough. The slot 24 may be tapered, as shown in Figure 4, to receive a pin 40. Upon the inner sides of each of the inner top pieces, adjacent the point of connection of each of the members 20, there is built up a rectangular box 25. Box 25 comprises a back plate 26, side plates 27 and 28 and a front plate 29. The side plates 27 and 28 are slotted as at 30 and 31, and the front plate 29 is notched as at 32.

An open rectangular frame 33 is provided, having a rectangular opening 34 therein and pins 35 and 36 extending from either of the sides thereof. The frame 33 is normally disposed within the box 25, with the pins 35 and 36 extending through the slots 30 and 31 respectively, as shown in Figure 4.

In the manufacturing of this device, it is of course necessary to attach the pins 35 and 36 by spot welding or the like after the frames 33 are mounted in the boxes 25.

It will be understood that each cross piece 20 has at each end thereof the configuration shown on the cross piece 20, of Figure 5, and there is for each such end a box 25 similar to the box 25, shown in Figure 5. The box 25 is attached to the I-beam or channel by welding directly thereto, as shown.

In Figures 1 and 2 there is shown in phantom only the conventional rotary mechanism and draw works mounted upon the portable base of this invention. When it is desired to erect the base, the structural members A and B are transported to the site and placed in position on previously leveled ground. The cross members 20 are then attached as follows. The beams are lowered into place with the members 23 extending into the slots 32 of the plates 29. The frame 33 is then moved forwardly so that the opening 34 surrounds the member 23 with the slot 24 disposed to the rear of the frame 33. The pins 40 are then inserted, thus clamping the members

20 in the boxes 25. Similarly, when it is desired to dismantle the base, the cross members 20 are removed simply by driving out the pins 40, retracting the frames 33 and withdrawing the members 23 from the slots 32.

From the foregoing description, it will be apparent that there is provided by this invention a portable base for a drilling rig in which means are provided for quickly and readily attaching and detaching the cross pieces to and from the structural members and thus for quickly and readily assembling or disassembling the bases.

While there has been described what is at present considered a preferred embodiment of the present invention, it will be understood by those skilled in the art, that various changes and modifications can be made therein without departing from the essence of the invention and it is intended to cover herein all such changes and modifications as come within the true spirit and scope of the appended claims.

What is claimed is:

1. A drilling rig support comprising a pair of structural members: cross pieces connected with said structural members; each of said cross pieces having at each end thereof an extension; each extension having an opening therein; means on said structural members forming boxes each having a front wall and side walls; means forming an upwardly opening notch in each of said front walls; said extensions each removably fitting within one of said notches in said front walls; a rectangular open frame in each of said boxes; said extensions being received within said open frames with said open frames being slidably mounted on said extensions; each of said open frames having pins projecting laterally therefrom; means forming transverse slots in said side walls; said pins projecting through said slots; and keys removably fitting in said openings in said extensions removably locking said extensions within said boxes, said open frames in locked position being held between said keys and said front walls.

2. A drilling rig support comprising a pair of structural members: cross pieces connected with said structural members; each of said cross pieces having at each end thereof an extension; each extension having an opening therein; means on said structural members forming boxes each hav-

ing a front wall and side walls; means forming an upwardly opening notch in each of said front walls; said extensions each removably fitting within one of said notches in said front walls; a rectangular open frame in each of said boxes; said extensions being received within said open frames with said open frames being slidably mounted on said extensions; each of said open frames having pins projecting laterally therefrom; means forming transverse slots in said side walls; said pins projecting through said slots; and keys removably fitting in said openings in said extensions removably locking said extensions within said boxes, said open frames in locked position being held between said keys and said front walls, and said open frames being slidably upon said extensions upon removal of said keys to release said extensions from said boxes.

3. A support structure comprising a pair of parallel structural members, a cross beam interposed between said parallel structural members, said cross beam having an axial projection at each end thereof, each projection having an opening therein, a box structure secured to each of said structural members, each box structure having a front wall and side walls, means forming an upwardly opening notch in each front wall, each projection being received within one of said notches, an apertured part received within each box structure, each apertured part being received on the projection in telescopic relation, laterally projecting pins on each apertured part, means forming slots in the side walls of each box structure receiving said pins, and a key removably mounted in each opening in the projections for detachably securing said projection within one of said box structures, each apertured part being confined between one of said keys and one of said front walls.

LOUIS A. WHIPPLE, JR.

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