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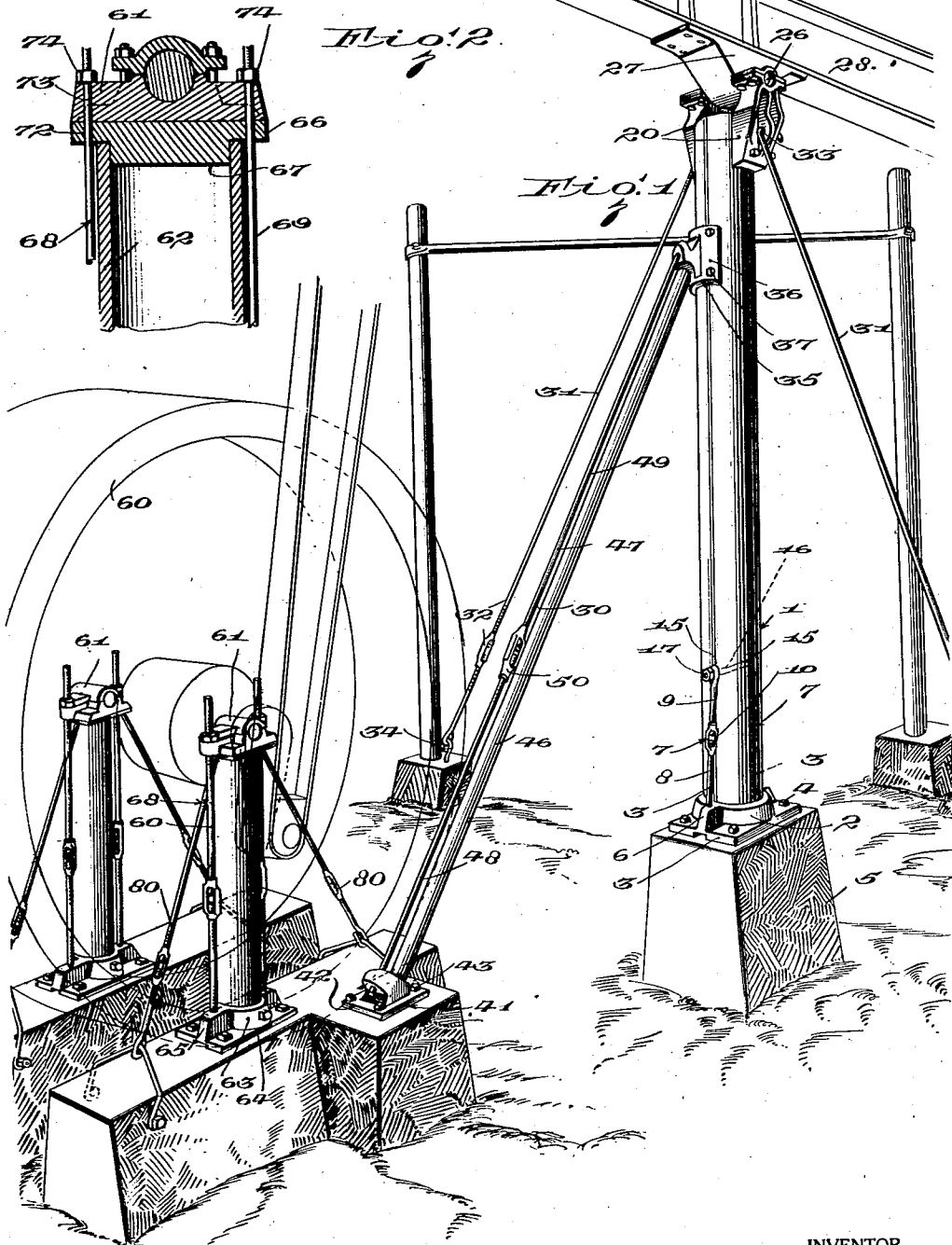
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G. STOUFFLET

PUMPING RIG

Filed Oct. 19, 1925

2 Sheets-Sheet 1



WITNESSES

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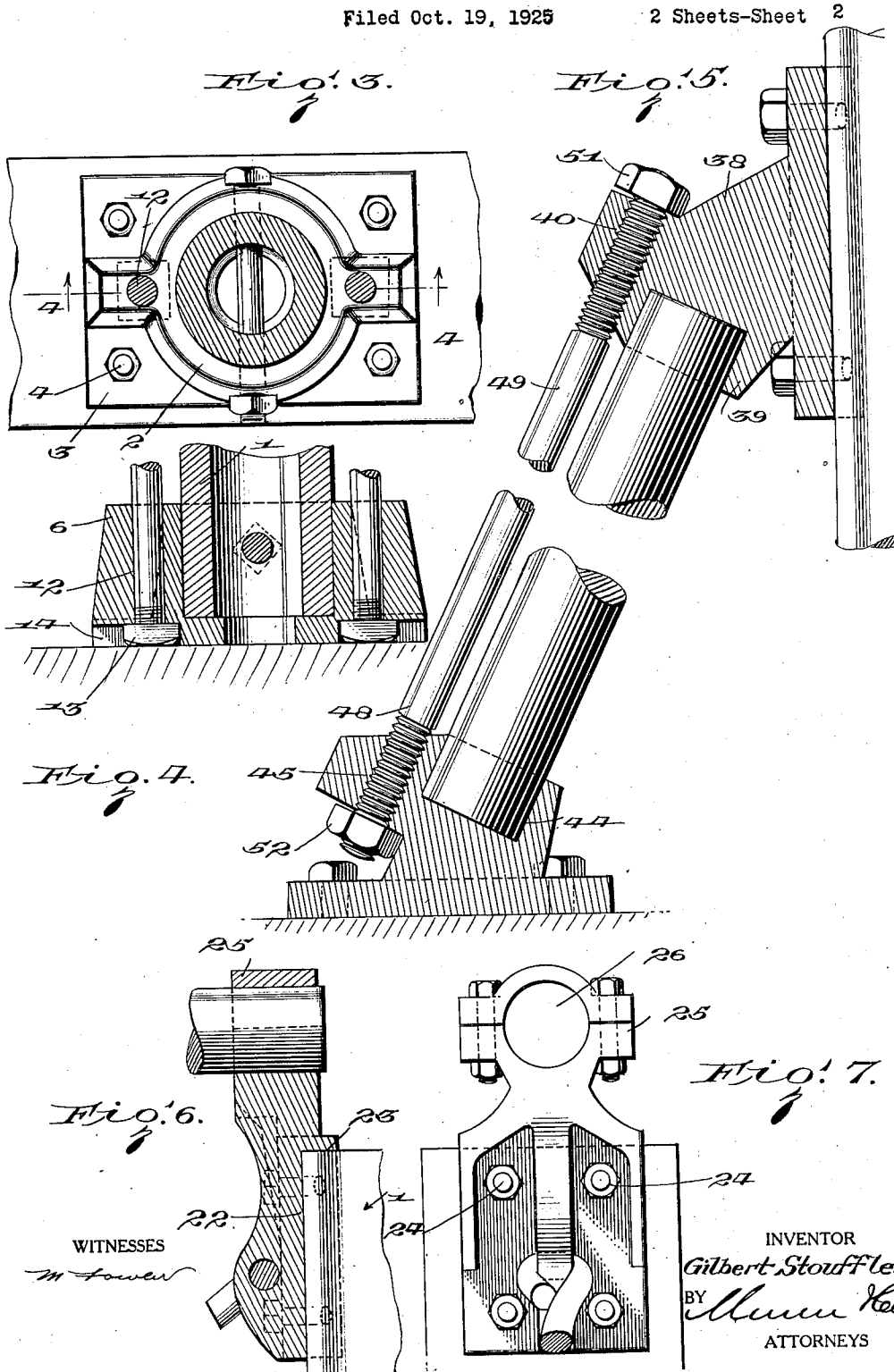
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UNITED STATES PATENT OFFICE.

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PUMPING RIG.

Application filed October 19, 1925. Serial No. 63,465.

This invention relates to pumping rigs for use with oil well equipment.

One of the principal objects of the invention is to provide a pumping rig which is strong, durable and rigid and yet may be readily set up and taken down so that the rig can be used over and over again.

A further object is to provide a rig having these advantages and capacities and which is adapted to be manufactured from materials and by means of facilities ordinarily available.

Other objects and advantages reside in certain novel features of the construction, arrangement and combination of parts which will be hereinafter more fully described and particularly pointed out in the appended claims, reference being had to the accompanying drawings forming a part of this specification, and in which:

Figure 1 is a fragmentary perspective view illustrating an oil rig constructed in accordance with the present invention,

Figure 2 is a sectional view showing how the bearings are mounted on the upper ends of the jack post,

Figure 3 is a view in horizontal section through the Sampson post,

Figure 4 is a view in vertical section on the line 4-4 of Figure 3,

Figure 5 is a fragmentary view partly in vertical section and partly in side elevation illustrating the major bracing means employed for the Sampson post,

Figure 6 is a detail view taken on the line 6-6 of Figure 7 and illustrating the structure of one of the bearing brackets provided for the walking beam, and

Figure 7 is a view in elevation further illustrating the structure of the bearing bracket shown in Figure 6.

Referring to the drawings it will be seen that the oil rig embodying the present invention includes a Sampson post 1 having its lower end fitted in a collar 2 integrally formed with a metal base 3 secured by bolts and nuts 4 to a concrete foundation 5. Vertical webs 6 integral with the collar and base serve to strengthen and reinforce the same.

For the purpose of holding the Sampson post to the base plate and for bracing the same longitudinally, adjustable securing and brace rods 7 are provided on the opposite sides of the post 1. Each rod 7 includes a pair of sections, designated at 8 and 9, having their adjacent ends adjustably connected by means

of a turnbuckle 10. The lower end of the section 8 is extended through an opening 12 provided therefor in the web 6. The extreme lower end of the section 8 of each rod is engaged with a nut 13 snugly fitted in a slot 14 provided in the base plate below the web. The upper end of each section 9 has an eye 15 integrally formed therewith. The eyes 15 of the two brace rods are diametrically opposite and receive the shank of a bolt 16 which passes through bolt holes provided therefor in the plate and which is held against displacement by a nut 17. The nut 17 engages one of the eyes 15 and the head of the bolt engages the other eye 15.

At the upper end of the Sampson post a pair of bearing brackets 20 are provided, the bearing brackets being arranged diametrically opposite each other, as shown in Fig. 1. Each bearing bracket has a recess 22 in its inner face in which a portion of the upper end of the Sampson post 1 is fitted, as illustrated to advantage in Fig. 6. At the upper end of each recess 22 a shoulder 23 is formed and this shoulder 23 engages the top of the Sampson post. Bolts and nuts 24 fasten the bearing brackets to the Sampson post. Bearings 25 are provided on the bearing brackets and in these bearings trunnions 26 of a mounting member 27 are oscillatably fitted. The mounting member 27 is secured to the underside of the central portion of the walking beam 28.

The Sampson post 1 is braced by means of a major bracing unit, designated generally at 30, and auxiliary bracing rods 31 which are adjustable as to length by means of turnbuckles 32 and which have their upper ends connected, as at 33, to the bearing brackets and their lower ends connected, as at 34, to the foundation of the rig. The major bracing unit 30 comprises a bracket 35 having a curved attaching portion 36 secured by bolts and nuts 37 to the Sampson post and formed with a laterally extending lug 38 having a socket 39 therein and an opening 40 extending therethrough. A bracket, designated generally at 41, is also provided in the major bracing unit and has an attaching plate 42 bolted, as at 43, to a portion of the foundation of the rigging. This bracket 41 also has a lug 42 which inclines upwardly therefrom and which is formed with a socket 44 and a transverse opening 45. The socket 44 is alined with the socket 39 and the openings 40 and 45 are also alined. A rigid and heavy brace

bar 46 is provided and has its ends fitted in sockets 39 and 44. A tensioning rod, designated generally at 47, is also incorporated in the major bracing unit and is made up of sections 48 and 49 adjustably connected to each other by means of a turnbuckle 50. The upper end of the section 49 is extended through the opening 40 and projects beyond the same. The projecting portion of the section 49 has a nut 51 threaded thereon and engaging a portion of the lug 42. The lower end portion of the section 48 extends through the opening 45 and is engaged by the nut 52. With this arrangement the tensioning rod 47 may be placed under proper tension to hold the brace bar in its sockets.

The walking beam is oscillated from the bull wheel 60 in the usual manner, but the shaft of the bull wheel is journaled in bearings 61 carried by check posts 62 constructed and mounted in accordance with the present invention. The jack posts although differing in some respects from the Sampson post have common features of advantage therewith. As shown in Figures 1 and 2 the jack posts have their lower ends fitted in collars 63 integrally formed with the base plates 64, webs 65 being provided to reinforce the collars and base plates. The bearings 61 are mounted on top plates 66 having reduced depending extensions 67 which snugly fit in the upper ends of the posts 62. Like the bolts 16, plates 66 provide transversely extending cross members engaging with the post on which they are mounted and co-operable with brace rods 68 made up of sections 69 and 70 adjustably connected by means of a turnbuckle 71. The section 69 is extended up through openings 72 and 73 provided in the top plate 66 and bearing 61, respectively. Nuts 74 are threaded on the sections 69 and engage the bearing. The lower ends of the sections 70 are connected to nuts fitted in slots in the base plate in exactly the same way that the nuts 13 are associated with their sections 8 and slots 14. In fact, except for the difference in length the jack posts and in the different form of bearings provided at their tops the mounting of the jack posts is substantially the same as the mounting of the Sampson post. Adjustable braces 80 are provided be-

tween the bearings 61 and the portions of the foundation of the rigging.

I claim:—

1. In a rig of the character described, a post, means for supporting the lower end of the post, bracing means for the post including a bracket fixed to the post, a bracket fixed to the foundation of the rig, said brackets having inclined lugs formed with aligned sockets and openings, the end walls of the sockets being opposed, a rigid bar having its end portions fitted in the sockets, against the end walls of the socket, and a tensioning rod extending through the openings in the lugs and connected with the lugs.

2. As an article of manufacture, an attaching plate, a lateral enlargement formed therewith and extending obliquely therefrom and having a socket in one face to receive one end of a brace rod, and a laterally extending ear formed with the body adjacent the socket to receive a tie rod extending parallel to a brace rod engaged with the socket.

3. In a brace for vertical standards, a plate for attachment to the standard, a second plate to be anchored to a support and extending at right angles to the first-mentioned plate, an angularly disposed enlargement formed with each plate and having opposed recessed faces, a brace rod having its ends received in the recessed faces, parallel perforated ears projecting from the enlargement, and a tie rod extending parallel to the brace rod and engaged with the perforated ears.

4. In a rig of the character described, a post, means for supporting the lower end of the post, bracing means for the post including a bracket fixed to the post, a bracket fixed to the foundation of the rig, said brackets having inclined lugs formed with aligned sockets and openings, the end walls of the sockets being opposed, a rigid bar having its end portions fitted in the sockets against the end walls of the sockets, and a longitudinally adjustable tensioning rod having its end portions extending through the openings in the lugs and engaged by nuts at the opposite sides of the lugs.

GILBERT STOFFLET.