

No. 631,504.

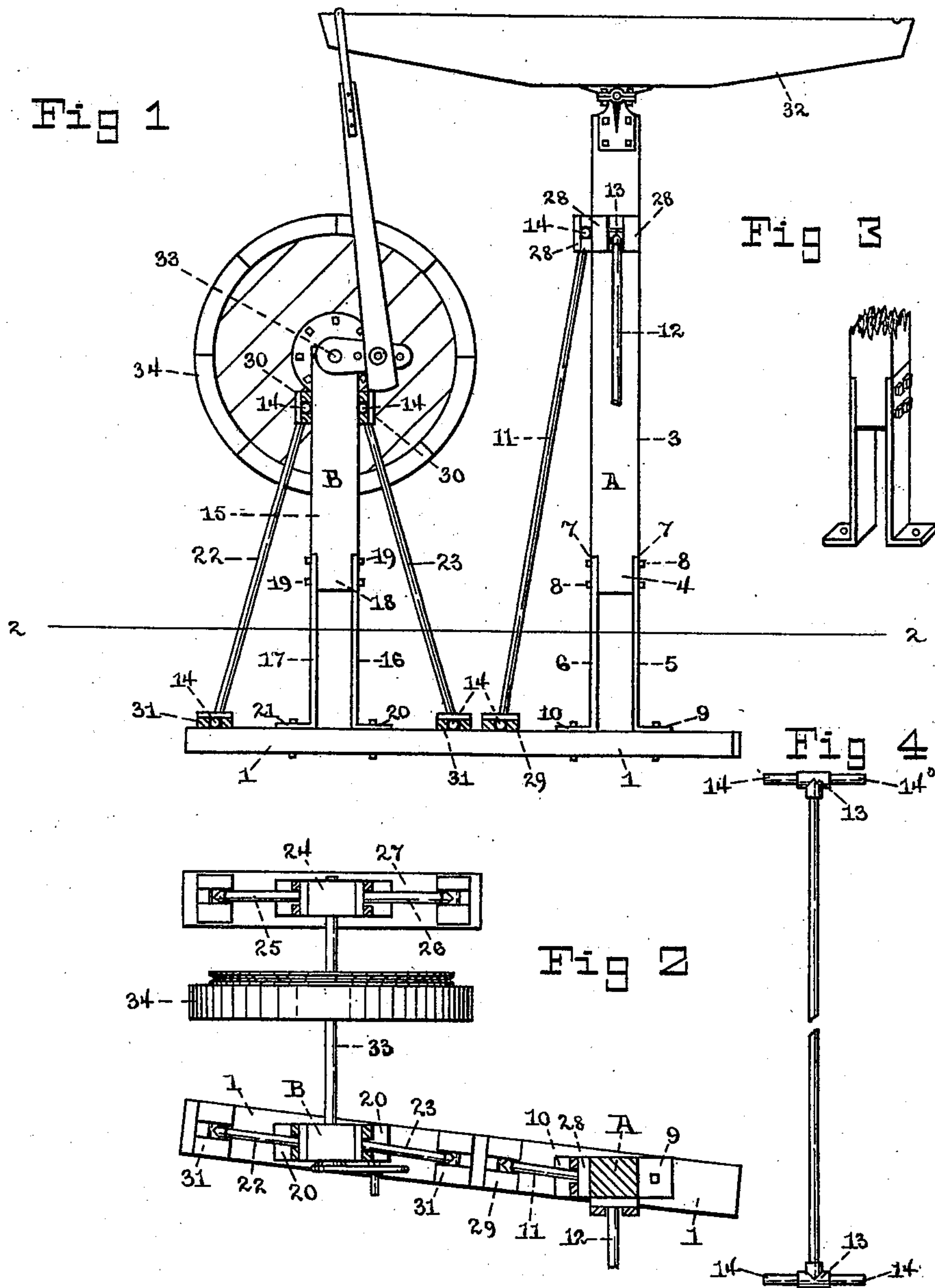
Patented Aug. 22, 1899.

C. C. HOWELL.

OIL OR ARTESIAN WELL DRILLING AND PUMPING RIG.

(Application filed Jan. 9, 1899.)

(No Model.)



WITNESSES;

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UNITED STATES PATENT OFFICE.

CHARLES C. HOWELL, OF BRADFORD, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO ROBERT ROY, OF SAME PLACE.

OIL OR ARTESIAN WELL DRILLING AND PUMPING RIG.

SPECIFICATION forming part of Letters Patent No. 631,504, dated August 22, 1899.

Application filed January 9, 1899. Serial No. 701,608. (No model.)

To all whom it may concern:

Be it known that I, CHARLES C. HOWELL, a citizen of the United States, residing at Bradford, in the county of McKean and State of Pennsylvania, have invented a new and useful Improvement in the Construction of and Setting the Jack-Posts and Samson-Posts of Oil or Artesian Well Rigs, of which the following is a specification.

My invention relates to improvements in setting the main sill and subsill as well as in the construction of the jack-posts and samson-posts.

The objects of my improvement are, first, to save in the cost of rig-timbers; second, to preserve the durability of the said sills and posts, and, third, to provide posts of great strength as well as durability. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of the main sill shown below the line of the surface, the samson-post supporting the walking-beam, the front jack-post, with the rig-iron shaft, supporting the band-wheel, and the several pipe-braces by which the posts are held rigid. Fig. 2 represents a ground plan of Fig. 1, showing the subsill and the back jack-post and its braces. Fig. 3 represents a perspective view of a set of plates secured to the tongued portion of one of the posts. Fig. 4 represents an enlarged upright view of one of the pipe-braces.

Similar letters and figures refer to similar parts throughout the several views.

In Fig. 1 numeral 1 is the main sill, located below the surface-line 2. 3 is the samson-post, consisting of the rectangular-shaped timber A, provided at its base with the tongue 4 and the plates 5 and 6, which are bolted to the tongue 4. The object of the tongue 4 is to provide the shoulders 7, which rest on top of the plates 5 and 6, thus preventing a downward strain on the bolts 8. The plates 5 and 6 are provided with the foot-pieces 9 and 10, which are bolted to the main sill 1. The samson-post 3 is further provided with the braces 11 and 12, and for cheapness, durability, and rigidity I prefer to use wrought-iron pipe, second-hand pipe being always obtainable in the oil regions at a nominal figure. The

braces 11 and 12 are provided at each of their ends with the T's 13 and the nipples 14 and secured at their upper ends by the wood blocks 28 to the upper part of the samson-post 3. The brace 11 is movably secured on the main sill 1 by the wood blocks 29. The object of securing the brace 11 movable on the main sill 1 is that in case the timber A of the samson-post 3 is destroyed by loosening the earth around the brace 11 it can be moved back, a new timber inserted between and secured to the plates 4 and 5, and then returned to its place against the samson-post. The lower end of the brace 12 is secured in a similar manner to a derrick mud-sill. (Not shown.)

15 is the front jack-post, consisting of the rectangular timber B and the plates 16 and 17. The lower end of the timber B is provided with the tongue 18, to which the plates 16 and 17 are secured by the bolts 19. The object of the tongue 18 is for the same purpose as the tongue 4 of the samson-post 3 described above. The plates 16 and 17 are provided with the foot-pieces 20 and 21, which are bolted to the main sill 1.

22 and 23 are braces secured at their upper ends by the wood blocks 30 to the upper part of the jack-post 15 and their lower ends movably secured by the wood blocks 31 to the main sill 1 for the same purpose as described above in connection with the samson-post brace 11. The back jack-post 24 consists of a rectangular-formed timber provided with two plates having foot-pieces and is the duplicate of the front jack-post, including the braces 25 and 26, excepting that these latter are secured to the subsill 27.

To protect the lower ends of the samson-post and jack-posts from the rot which would occur from frequent exposure to the action of the surface water, I extend the upper ends of the plates above the surface to such a distance that when connected to their respective tongues the lower ends of the timbers will be about one foot from the ground.

32 is the walking-beam.

33 is the rig-iron shaft.

34 is the band-wheel.

The foundations of the oil-well rigs now in general use are made of heavy timbers, consisting of the main sill and the subsill, which

are set in and keyed to four or five cross or mud sills which lie on the surface of the ground exposed to the action of the atmosphere and frost upheavals. The posts are set
5 on and keyed to their respective sills, the oil operator depending on the weight of the timber foundation to keep the posts rigid and firm. In my method of preparing the foundation for my posts I use only the main sill
10 and subsill made from light timbers, which I lay in trenches preferably below the frost-line. This preserves them from both the action of the atmosphere and of frost. After the posts are set the trenches are filled up
15 and the earth tamped down, thus making the foundation as solid as it can possibly be desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters
20 Patent, is—

1. In an oil and Artesian well rig the combination with the embedded main sill and subsill, of the samson-post consisting of a timber of rectangular form provided with a tongue,
25 and the iron plates provided with foot-pieces, and the jack-posts consisting of one timber

each of rectangular form provided with a tongue, and the plates provided with foot-pieces, substantially as shown and described.

2. In an oil and Artesian well rig, the samson-post consisting of a timber of rectangular form provided at its lower end with a tongue, and the plates provided with foot-pieces secured to the embedded main sill and further provided with the iron braces; the front jack-
35 post consisting of a timber of rectangular form provided at its lower end with a tongue, and the plates provided with foot-pieces secured to the embedded main sill, and further provided with the iron braces; the back jack-
40 post consisting of a timber of rectangular form provided at its lower end with a tongue, and the plates provided with foot-pieces secured to the embedded subsill, and further provided with the iron braces, the embedded
45 main sill and the embedded subsill substantially as shown and described.

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Witnesses:

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