

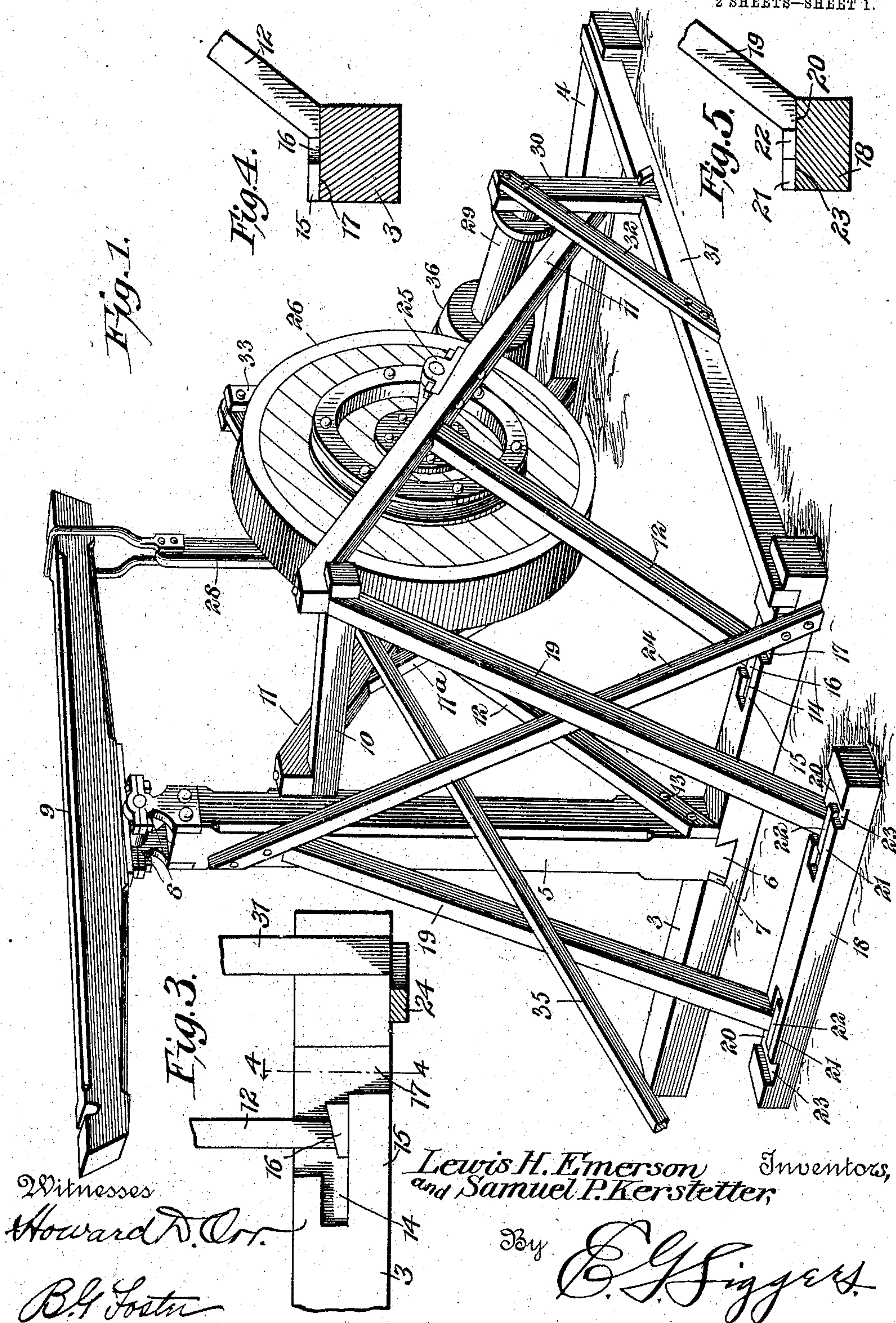
No. 815,519.

PATENTED MAR. 20, 1906.

L. H. EMERSON & S. P. KERSTETTER.  
OIL WELL RIG.

APPLICATION FILED MAY 9, 1905.

2 SHEETS—SHEET 1.



Witnesses  
Howard D. Orr.

B. H. Foster

Lewis H. Emerson Inventors,  
and Samuel P. Kerstetter

By

C. J. Figger

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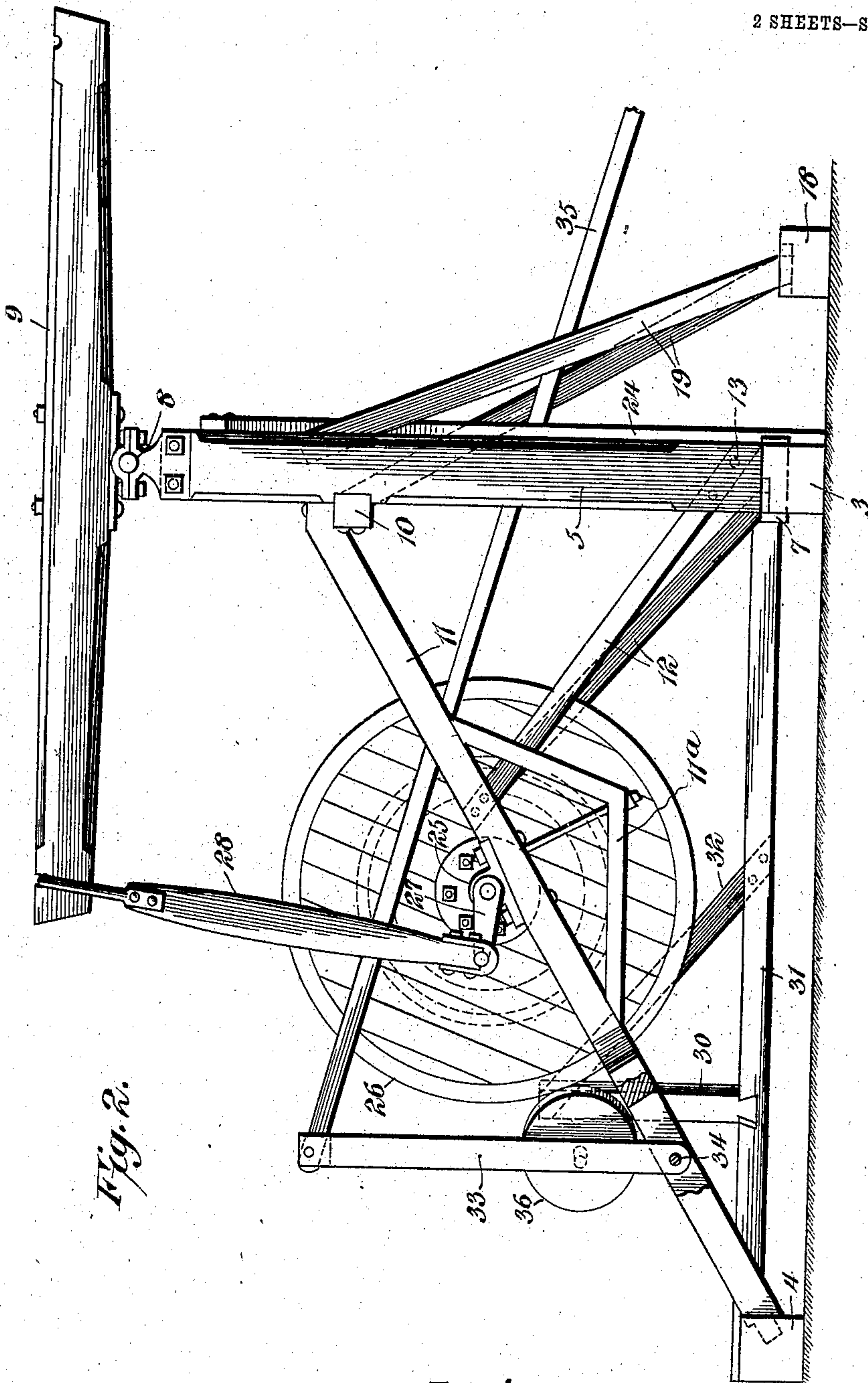


Fig. 2.

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# UNITED STATES PATENT OFFICE.

LEWIS H. EMERSON AND SAMUEL P. KERSTETTER, OF DE YOUNG,  
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## OIL-WELL RIG.

No. 815,519.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed May 9, 1905. Serial No. 259,583.

*To all whom it may concern:*

Be it known that we, LEWIS H. EMERSON and SAMUEL P. KERSTETTER, citizens of the United States, residing at De Young, in the county of Elk and State of Pennsylvania, have invented a new and useful Oil-Well Rig, of which the following is a specification.

This invention relates more particularly to rigs employed in connection with mechanism for sinking oil or other deep wells; and the principal object is to provide a novel structure wherein a comparatively small amount of lumber is employed, said structure, however, having all the needed strength and rigidity of devices of this character, being durable and properly braced to withstand the usual shocks and strains.

An embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of the rig, and Fig. 2 is a view in elevation of the side opposite to that shown in Fig. 1. Fig. 3 is a detail top plan view showing the fastening of one of the braces to the mudsill. Fig. 4 is a cross-sectional view on the line 4-4 of Fig. 3. Fig. 5 is a cross-sectional view through the nose-sill, showing the connection of the brace therewith.

Similar reference-numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated a pair of spaced mudsills 3 and 4 is employed, upon one of which is mounted a samson-post 5, the lower end of which is dovetailed, as shown at 6, in the central portion of the mudsill and is retained in place by a suitable wedge 7. Upon the upper end of the samson-post are secured the usual bearings 8, in which is journaled a walking-beam 9. Secured transversely to the samson-post between its ends and projecting from one side of the same is a cross-bar 10, and suitably fastened upon this cross-bar are spaced downwardly-inclined girders 11, the lower ends of which are rigidly secured to the mudsill 4. Braces 12 are fastened to intermediate portions of the girders, one of the braces being attached, as shown at 13, to the lower end of the samson-post, the other being engaged with the mudsill 3 at one side of said samson-post. As shown, this engagement is secured by means of a seat 14, cut into the upper side of the mudsill and

having a longitudinally-disposed abutment-flange 15 at its rear side. The lower end of the brace 12 engages in the seat 14, and between said lower end and the flange 15 is a wedge 16. The brace is introduced to the seat and in advance of the flange through an entrance-mouth 17, located at one end of said flange 15.

Disposed on the opposite side of the mudsill 3 to the mudsill 4 is a nose-sill 18, and extending from this nose-sill are inclined braces 19, one of which is suitably fastened to the samson-post, the other being secured to the free end of the cross-bar 10 and constituting a support therefor. The lower ends of the braces 19 are attached to the nose-sill in the same manner that the brace 12 is connected to the sill 3—that is to say, the nose-sill 18 is provided in its upper side with seats 20, the rear walls of which are formed by up-standing flanges 21, constituting abutments. The lower ends of the braces 19 are located in the seats and are borne against by wedges 22, which also bear against the flanges 21. Entrance-mouths 23 for permitting the introduction of the braces to the seats extend from the rear side of the nose-sill. The samson-post is furthermore strengthened by a transversely-disposed brace 24, the lower end of which is attached to one end of the mudsill 3, the upper end being secured directly to said samson-post.

Journaled in boxes 25, secured to the girders 11, is a band or drive wheel 26, the shaft thereof carrying a crank 27 at one end, which crank is connected, by means of a pitman 28, with one end of the walking-beam. The girder 11, that is adjacent to the crank, is preferably strengthened by a strut-brace 11<sup>a</sup>. Driven from the band or drive wheel is a sand-reel 29, one end of which is journaled in a jack-post 30, mounted on a stringer 31, that connects the ends of the mudsills 3 and 4. The jack-post is braced, as shown at 32. The other end of the sand-reel is journaled in a lever 33, pivoted, as shown at 34, to one of the girders 11, the upper end of said lever having attached thereto an actuating-bar 35. A friction-wheel 36, carried by the sand-reel, coacts in the usual manner with the drive or band wheel.

This structure is employed in the ordinary manner well known to those skilled in the art. Particular attention is invited to the com-



paratively small amount of timber used in the construction. Thus the subsills, main sills, and two mudsills of the ordinary rig now in common use, as well as the jack-posts, are dispensed with. At the same time the structure is strong and durable, powerfully braced, and has proven by actual experience to be entirely practicable and efficient in operation.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a well-rig, the combination with spaced mudsills, of a samson-post mounted on one of the sills, a walking-beam located on the post, a girder connecting the post and the other sill, a drive-wheel journaled on the girder, and a brace connecting the lower end of the samson-post and the portion of the girder adjacent to the drive-wheel.

2. In a well-rig, the combination with spaced mudsills, of a samson-post mounted on one of the sills, a walking-beam pivotally supported on the samson-post, spaced downwardly-inclined girders having a connection with the post between its ends, a band-wheel journaled to and between the girders, and downwardly-inclined braces connected respectively to the intermediate portions of the girders, one of said braces being connected to the sill that carries the samson-post.

3. In a well-rig, the combination with a base-frame, of a samson-post mounted thereon, a walking-beam mounted on the upper end of the samson-post, a cross-bar secured to the post below the mounting for the walking-beam, downwardly-inclined girders secured to the cross-bar and the base-frame, and a drive-wheel journaled on the girders and connected to the walking-beam.

4. In a well-rig, the combination with spaced mudsills, of a samson-post mounted

on one of the mudsills, a cross-bar secured to the post, downwardly-inclined girders connected to the cross-bar and to the other mudsill, braces between the girders, the post, and the sill therefor, and a drive-wheel journaled on the girders.

5. In a well-rig, the combination with spaced mudsills, of a nose-sill spaced therefrom, a samson-post mounted on one of the mudsills, a cross-bar secured to the samson-post, girders connecting the cross-bar and the other mudsill, a drive-wheel journaled on the girders, and braces between the nose-sill, the cross-bar, and the samson-post.

6. In a well-rig, the combination with spaced mudsills, of a stringer connecting the same, a samson-post mounted on one of the mudsills, girders having a connection with the samson-post and also connected to the other mudsill, a drive-wheel journaled on the girders, a jack-post mounted on the stringer, a lever journaled on one of the girders and a sand-reel journaled at one end in the jack-post and at its other end in the lever, said reel being movable into and out of coaction with the drive-wheel.

7. In a well-rig, the combination with spaced mudsills, of a nose-sill located at one side of the same, a samson-post mounted on the mudsill that is adjacent to the nose-sill, a cross-bar secured to the samson-post, downwardly-inclined girders secured to the cross-bar and to the other mudsill, braces for the girders, braces for the cross-bar and samson-post connected to the nose-sill, a drive-wheel journaled on the girders, a walking-beam pivoted on the samson-post, a connection between the driving-wheel and walking-beam, a stringer connecting the mudsills, a jack-post mounted on the stringer, a lever pivotally supported on one of the girders, means for actuating the lever, and a sand-reel journaled in the lever and in the jack-post and movable into and out of coaction with the drive-wheel.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

LEWIS H. EMERSON. [L. S.]

SAMUEL P. KERSTETTER. [L. S.]

Witnesses:

FRANK POTTER,

WILLIAM McELPHATRICK.