

No. 660,059.

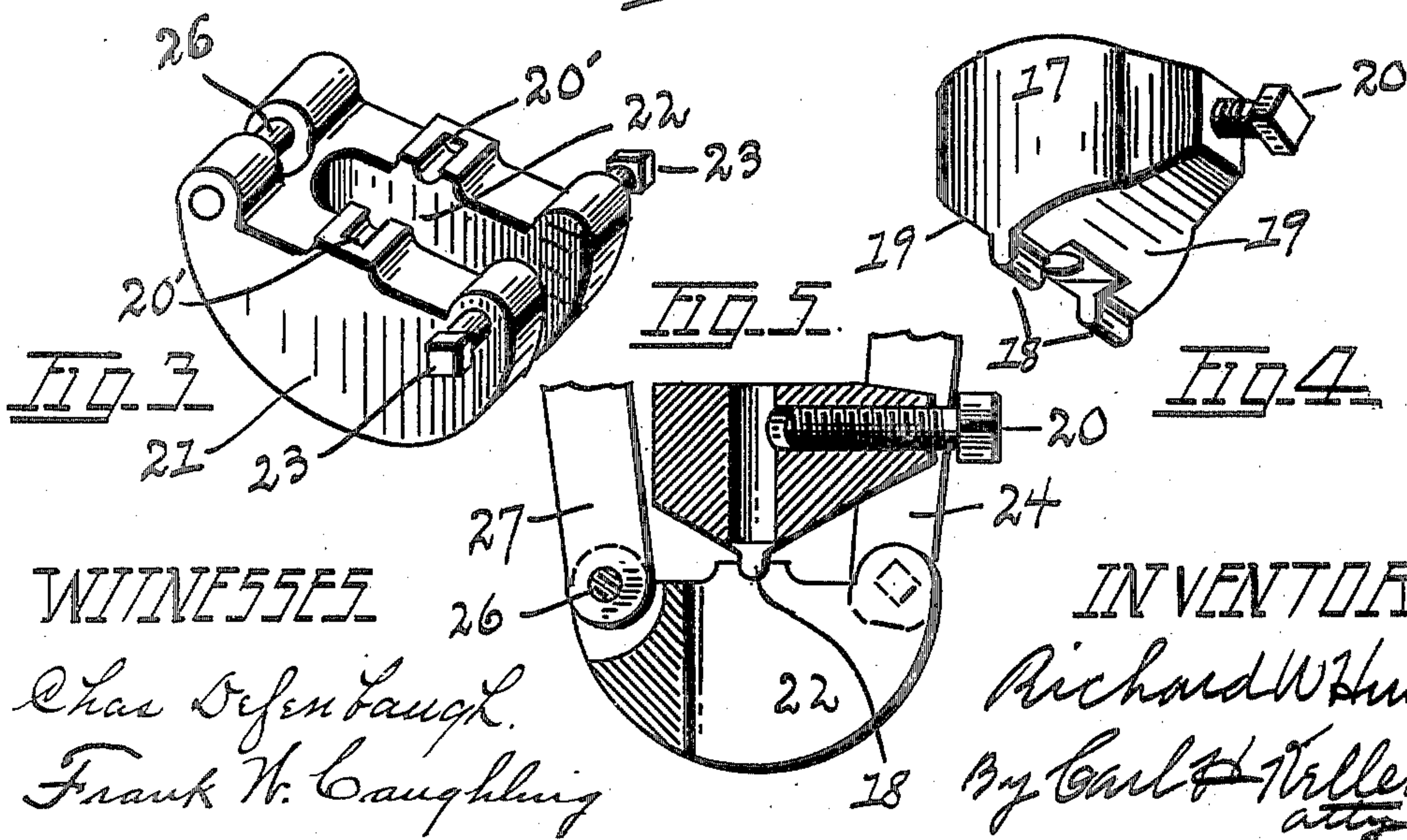
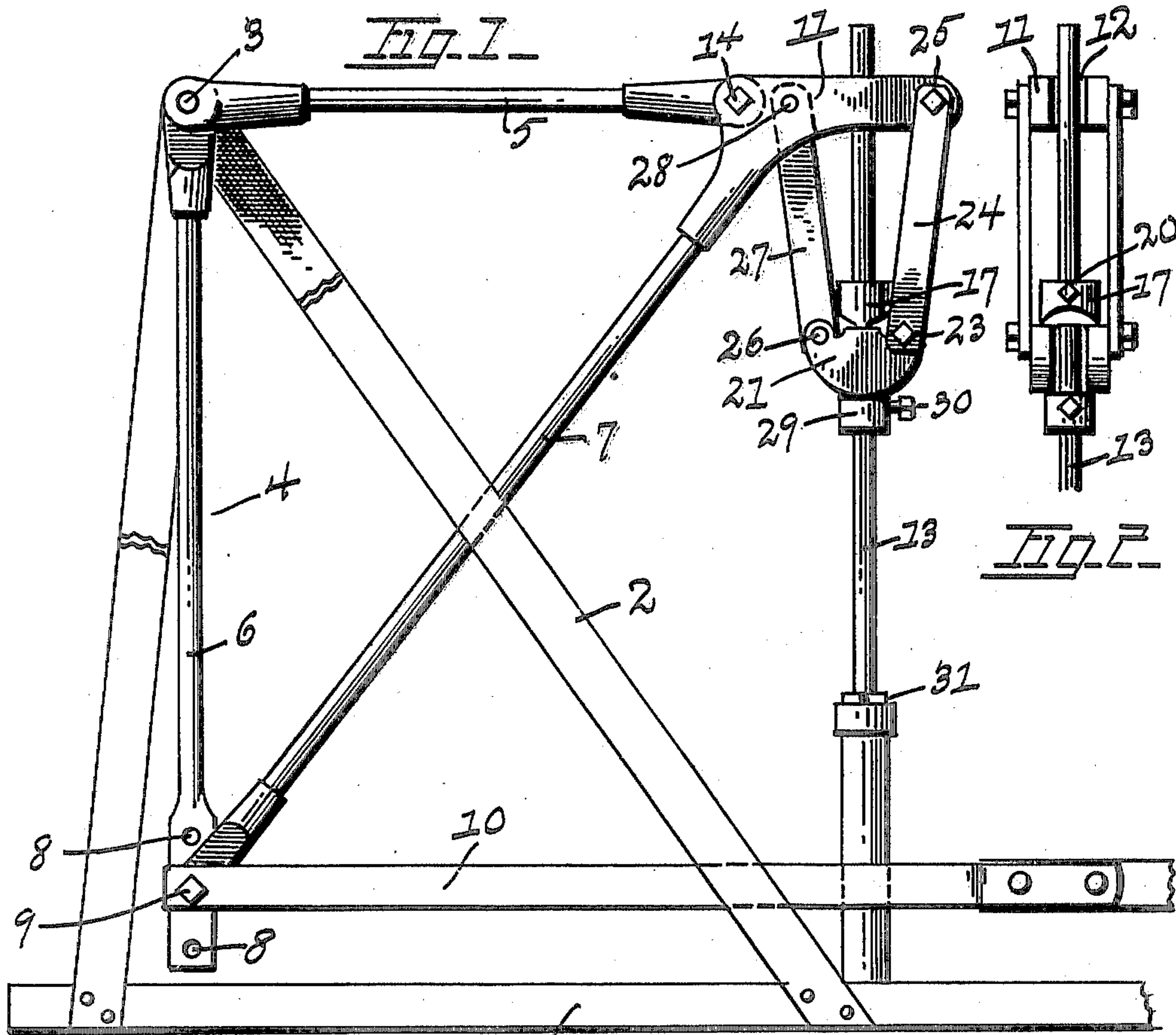
Patented Oct. 16, 1900.

R. W. HUDSON.
OIL WELL JACK.

(Application filed Mar. 3, 1900.)

(No Model.)

2 Sheets—Sheet 1.



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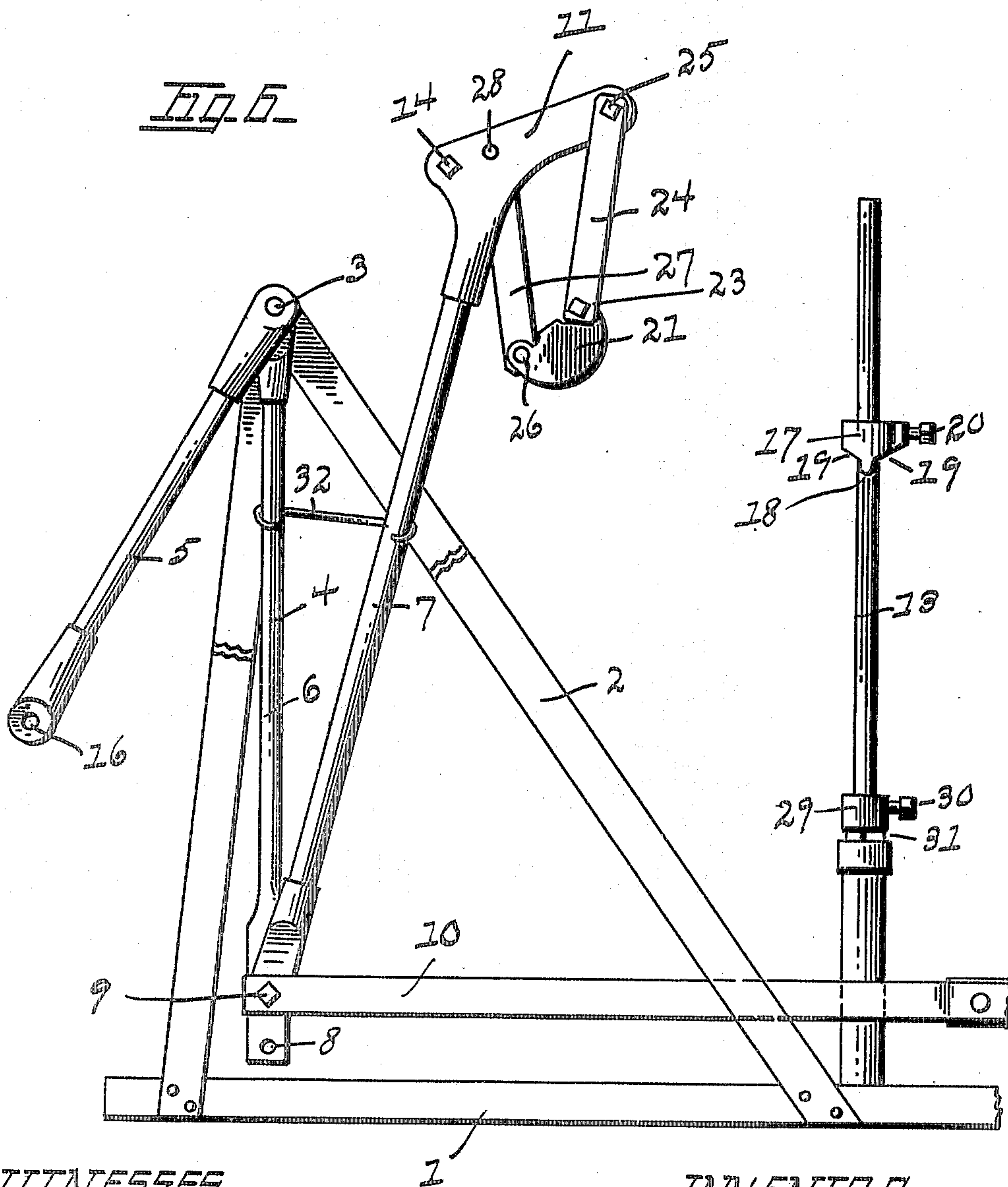
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2 Sheets—Sheet 2.



WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

RICHARD W. HUDSON, OF TOLEDO, OHIO, ASSIGNOR OF ONE-THIRD TO THE KIRK MANUFACTURING COMPANY, OF SAME PLACE.

OIL-WELL JACK.

SPECIFICATION forming part of Letters Patent No. 660,059, dated October 16, 1900.

Application filed March 3, 1900. Serial No. 7,150. (No model.)

To all whom it may concern:

Be it known that I, RICHARD W. HUDSON, of Toledo, county of Lucas, and State of Ohio, have invented certain new and useful Improvements in Oil-Well Jacks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention has reference to a pumping-jack for pumping oil-wells, and has for its object to provide a jack of simple and inexpensive construction for reciprocating the polish-rod and the pump-rods suspended therefrom.

It has further for its object to provide means for suspending the polish-rod, whereby the usual lateral strain upon the rod is avoided.

I further provide a simple means for removing the working parts of the jack from proximity to the polish-rod without the usual necessity of disconnecting the surface rod.

In carrying out the foregoing and such other objects as may hereinafter appear my invention consists in the construction and the parts and combination of parts hereinafter shown, described, and claimed.

In the drawings, Figure 1 is an elevation of my jack, a portion of one of the standards which support the jack being cut away. Fig. 2 is a front elevation of the hanger for suspending the polish-rod. Fig. 3 is a detail in perspective of the cradle which forms the lower portion of the hanger. Fig. 4 is a detail in perspective of the collar which is secured to the polish-rod and which when the jack is in operation rests upon the cradle shown in Fig. 3. Fig. 5 is a sectional elevation showing the relation of the cradle and the collar shown in Figs. 3 and 4, respectively. Fig. 6 shows the jack disconnected and removed from proximity to the polish-rod when the well is to be pulled.

Referring to the drawings, 1 designates the usual base or platform built around a well, to which are secured uprights or standards 2, which have fulcrumed at their upper ends by means of a transverse pin 3 the frame 4 of

the jack. The frame 4 is formed in hinged sections 5, 6, and 7, respectively. Sections 5 and 6 are hinged together by the pin 3, which passes through transverse perforations in the ends thereof. Section 6 is flattened at its lower end, which portion is formed with equidistant perforations 8 to receive a bolt 9 for pivotally connecting the surface rod 10 thereto and for the purpose of adjusting the length of the pump-stroke. Bolt 9 also secures the lower end of section 7 to section 6. Section 7 is formed at its upper end with a bifurcated casting 11, divided at 12 to permit the unobstructed movement of the polish-rod 13.

14 is a bolt which passes through the casting 11 at 15 and also the perforation 16 in the end of section 5 of the frame and serves to couple the sections 5 and 7 together when the jack is in operation. The polish-rod 13 is suspended by means of a collar 17, having the lower bearing points or surfaces 18 and the lower inclined faces 19. The collar 17 is secured to the polish-rod by a set-screw 20. The bearing-points 18 fit into recesses 20' on the upper side of the cradle 21, which is divided at 22 to permit the free movement of the polish-rod while the jack is in operation and also to permit the removal of the hanger from the rod. The lower side of cradle 21 is arc-shaped, with the axis of the arc transverse to the cradle coincident with the center of the bearing-surfaces 18. On the sides of the cradle are shouldered bolts 23 for pivotally attaching the cradle 21 to straps 24, through the lower ends of which the bolts 23 pass.

25 represents shouldered bolts on the projecting ends of the casting 11 for pivotally attaching the upper ends of straps 24.

26 is a pin passing through the rear end of the cradle 21 and also a strap 27, which strap is hinged at its upper end to the casting 11 by a pin 28 passing therethrough.

29 is an ordinary collar secured to the polish-rod by means of a set-screw 30. By suspending the polish-rod on both sides of the axial line there is an easy movement of the rod and no tendency to the usual lateral strain. When it is desired to pull the well, the collar 29 is lowered until it rests upon the stuffing-box 31. As the polish-rod moves

upward it is secured at the highest point of its movement by tightening the set-screw 30 in collar 29. The cradle 21 is then released from the polish-rod, bolt 14 is withdrawn, and
 5 section 5 thrown backward, section 7 being made to assume an elevated position, as shown in Fig. 6. Section 7 may be lashed in this position or secured by means of a hooked member, as shown at 32. The jack when folded
 10 up will continue to rock backward and forward, but will in no way interfere with those engaged in pulling the well.

The employment of my improved jack effects an appreciable saving in the time required to pull a well. Where other pumping-rigs in present use are employed, the initial operation in pulling a well is to detach the surface rod from the jack. This necessitates the employment of a power-brake, or the engine which furnishes power for pumping a
 20 number of wells must be shut down. The jack is then lifted after the surface rod is detached and swung in its entirety upon its supporting-frame to remove it from proximity to
 25 the polish-rod. This operation requires considerable time and labor.

From the description of my invention it will be seen that the necessity of detaching the surface rod is overcome, the working
 30 parts of the jacket are easily removed from proximity to the polish-rod, and there is a great saving of time and a considerable reduction in the cost of pumping a well.

I have illustrated and described the preferred details of construction; but it is evident that changes which would suggest themselves to the ordinary mechanic can be made therein without departing from the spirit of

my invention. For instance, it is evident that the frame may be disconnected at any
 40 suitable point. I may desire to form a hinged joint intermediate of the length of either section 5, 6, or 7, in which case the frame would be folded together without the necessity of removing the bolt 14.

What I claim, and desire to secure by Letters Patent, is—

In a pumping-jack the three-part frame suitably supported upon standards, the surface rod connected therewith, hinges formed
 50 at two angular points of the frame, and means for disconnecting the frame at a third point, a bifurcated extension on the frame having an inwardly-extending recess, a cradle formed with an inwardly-extending recess, straps
 55 pivotally attached to the forward sides of the cradle and to the forward sides of the bifurcated extension, a strap pivotally attached to the rear of the cradle and also to the rear of the bifurcated extension, a reciprocating polish-rod adapted to occupy the recesses in the
 60 cradle and the bifurcated extension, a collar on said polish-rod having lower bearing-points adapted to fit into recesses in the top of the cradle whereby the working parts of the jack
 65 are capable of being removed from proximity to the polish-rod substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of
 70 two witnesses.

RICHARD W. HUDSON.

Witnesses:

CARL H. KELLER,
 SAMUEL RHOADES.