

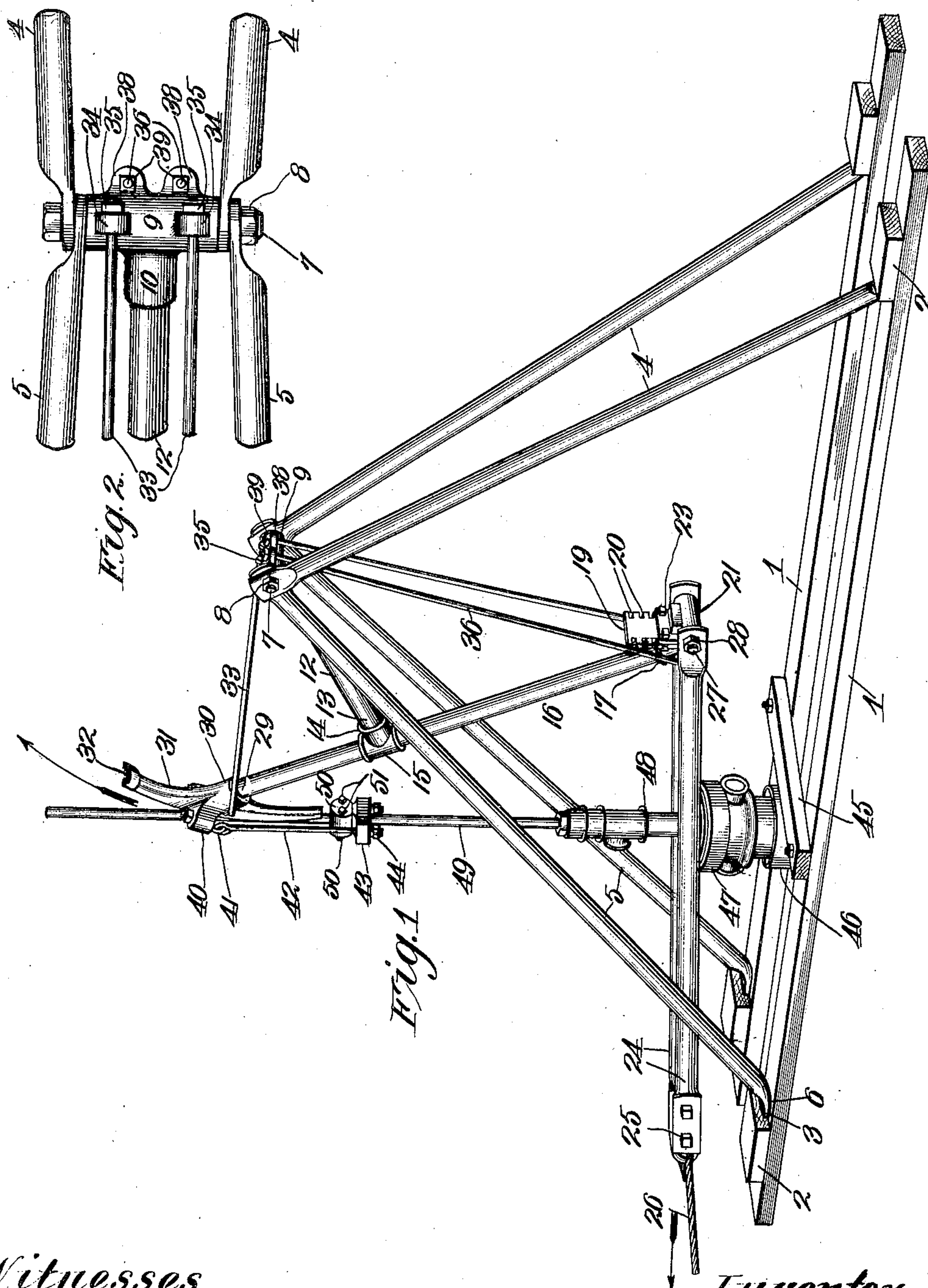
No. 889,278.

PATENTED JUNE 2, 1908.

J. R. WARE.  
PUMPING JACK.

APPLICATION FILED JUNE 23, 1906.

2 SHEETS—SHEET 1.



Witnesses  
Frank P. Gore.  
H. B. Rodgers.

Inventor  
J. R. Ware.  
By *George B. Sharp* Atty.

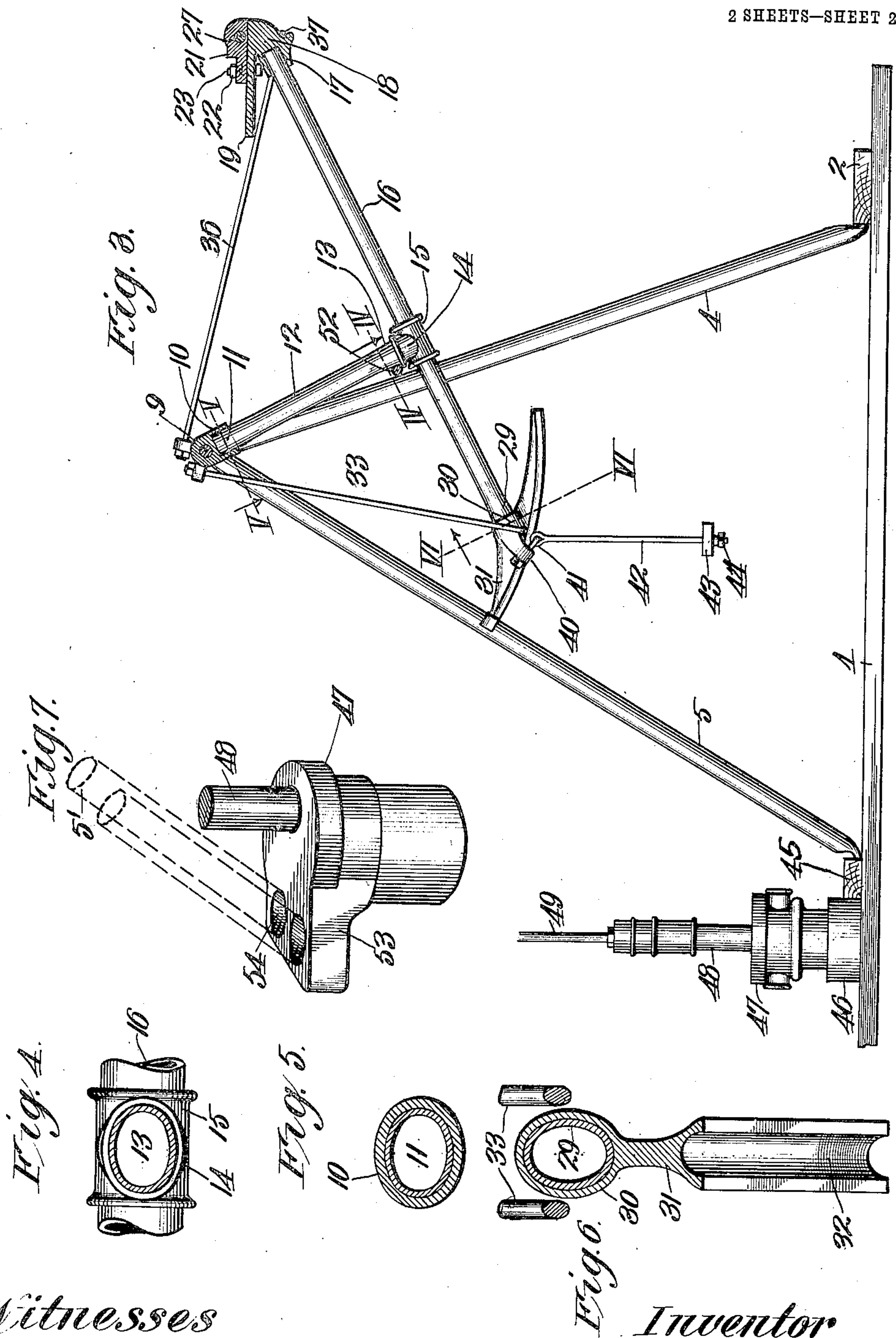
No. 889,278.

PATENTED JUNE 2, 1908.

J. R. WARE.  
PUMPING JACK.

APPLICATION FILED JUNE 23, 1906.

2 SHEETS—SHEET 2.





# UNITED STATES PATENT OFFICE.

JOHN R. WARE, OF OSAWATOMIE, KANSAS.

## PUMPING-JACK.

No. 889,278.

Specification of Letters Patent.

Patented June 2, 1908.

Application filed June 23, 1906. Serial No. 323,050.

*To all whom it may concern:*

Be it known that I, JOHN R. WARE, a citizen of the United States, residing at Osawat-  
omie, in the county of Miami and State of  
5 Kansas, have invented certain new and use-  
ful Improvements in Pumping - Jacks, of  
which the following is a specification.

This invention relates to pumping jacks,  
and my object is to produce a device of this  
10 character which operates efficiently and reli-  
ably.

A further object is to produce a device of  
the character named which can be quickly  
and easily arranged in or removed from oper-  
15 ative position with relation to the well to be  
pumped.

A still further object is to produce a pump-  
ing jack of simple, strong, durable, light and  
inexpensive construction.

20 With these general objects in view and  
others as hereinafter appear, the invention  
consists in certain novel and peculiar fea-  
tures of construction and organization as  
hereinafter described and claimed; and in or-  
25 der that it may be fully understood reference  
is to be had to the accompanying drawings,  
in which:—

Figure 1, is a perspective view of a pump-  
ing jack embodying my invention and ar-  
30 ranged in operative relation to an oil well  
pump. Fig. 2, is a top plan view of a portion  
of the same. Fig. 3, is a view partly in side  
elevation and partly in central vertical sec-  
tion of the pumping jack as withdrawn from  
35 operative relation to the well. Fig. 4, is a  
section taken on the line IV—IV of Fig. 3.  
Fig. 5, is a section taken on the dotted line  
V—V of Fig. 3. Fig. 6, is a section taken on  
the line VI—VI of Fig. 3. Fig. 7, is a sec-  
40 tional perspective view of a modified con-  
struction.

Referring to the drawings in detail, 1 indi-  
cates a pair of substantially parallel bars  
provided with abutment blocks 2, formed  
45 with sockets or recesses 3 at their inner sides  
by preference. A truss frame comprises up-  
wardly converging bars 4 and 5 formed by  
preference with flattened ends or feet 6 to en-  
gage the sockets or recesses 3. Each bar 4  
50 crosses a bar 5 and is connected thereto by a  
horizontal transverse bolt 7 retained in posi-  
tion by a nut 8 or its equivalent.

9 indicates a spacing sleeve interposed be-  
tween the upper ends of bars 4 and 5 and piv-  
55 otally mounted on the bolt 7 and said sleeve  
is provided with an elliptical tubular stem 10,

to receive the correspondingly formed end 11  
of a tubular brace 12, the opposite end of said  
brace being formed elliptical at 13 to engage  
the elliptical stem 14 of a T-coupling 15 60  
through which extends a tube 16. At one  
end the tube 16 fits in a socket 17 of a casting  
18 and said casting is provided with a plate  
19, provided with a plurality of notches or  
openings 20. 65

21 is a casting fitting against the opposite  
side of plate 19 from tube 16 and 23 bolts  
which extend through said casting and the  
desired notches or openings 20 of plate 19,  
nuts 22 retaining said bolts in position. 70

24 indicates a pair of bars secured to-  
gether at their front ends as at 25, and  
coupled as shown or otherwise to a cable or  
its equivalent 26 leading to any suitable  
power for operating the pumping jack as 75  
hereinafter explained, the rear ends of the  
bars 24 fitting against opposite ends of cast-  
ing 21 and pivotally connected thereto by  
bolt 27, a nut 28 engaging the bolt retain-  
ing it in position. 80

The opposite end of tube 16 from casting  
18 is of flattened or elliptical form in cross  
section as at 29 and engages the correspond-  
ingly formed tubular stem or socket 30 of a  
curved arm or arc 31 provided with a periph- 85  
eral groove 32. A U-shaped bolt 33 ex-  
tends through the arm or arc 31 and has its  
ends connected to sleeve 9 preferably by  
extending through the lugs 34 thereof and  
engaging the ends of said bolt are nuts 35. 90  
A U-shaped bolt 36 engages a notch 37 in  
casting 18, and at its opposite end is also  
connected to the sleeve 9, preferably by  
extending through lugs 38 projecting from  
said sleeve, nuts 39 engaging the ends of 95  
said bolt. By screwing said nuts 35 and 39  
tightly upon their respective bolts, the cast-  
ing 18 and arm or arc 31 are clamped rigidly  
on the opposite ends of tube 16, and in con-  
junction with the tube 12 connecting tube 100  
16 with sleeve 9 produce a rigid triangular  
pumping jack of skeleton and light con-  
struction in which there is no possibility of  
tube 12 having any rotary or swivel move-  
ment around its axis or any possibility of 105  
the arm or arc having swivel or turning  
movement on tube 16.

40 indicates ears projecting from opposite  
sides of arm or arc 31 and secured to the  
same are eye-bolts 41 pivotally linked to 110  
pendent eye-bolts 42 extending through a  
block 43, the latter being held on bolts 42 by



retaining nuts 44. 45 indicates a cross bar connecting base bars 1 and adapted to bear against an oil well casing 46 at opposite sides of which base bars 1 extend, the pump head 47 of the well occupying a plane below draft bars 24, which are disposed at opposite sides of pump tube 48.

49 indicates the piston stem of the pump, the same being disposed vertically and engaged by groove 32 of the arm or arc 31. Said stem also extends slidingly through block 43, and engaging the stem just above the block is a collar, consisting preferably of two similar members 50 clamped by bolts 51 upon said stem.

In practice, as the power pulls the cable in the direction indicated by the arrow Fig. 1, the jack rotates in the direction of the curved arrow Fig. 1, with bolt 7 as its axis of movement and through the instrumentality of the bolt 43 lifts the collar rigidly secured to the piston stem and thereby effects the ejection of the oil from the pump, if the well is an oil well. As the pull on the cable is relaxed, the jack gravitates back to its original position as shown in Fig. 1, and permits the piston stem to drop back to its original position, it being understood in this connection that should said stem or pump rod stick and fail to drop, the return of the jack to its original position will not be interfered with because block 43 will slide downward on the stem or rod and the curved arm or arc will swing downward inward of the collar, the parts being so proportioned that said arm or arc will pass said collar without conflict.

If it be desired to vary the leverage of the jack, nuts 23 can be removed from bolts 22 and the latter withdrawn from openings or notches 20 to permit casing 21 to be adjusted upward or downward as may be desired on plate 19, bolts 22 being then slipped through a different set of openings or notches and the nuts 23 secured upon the bolts to clamp the parts in their new relation.

When it is desired to dispose the device in inoperative position to give convenient access to the pump, bolt 27 is removed to permit bars 24 to be disconnected from the jack and laid aside, the collar of the piston stem or rod 49 is then removed and the rods 42 are detached from block 43 to permit the jack to be swung to the position shown in Fig. 3, in which position it can be held by inserting a stick between the rear sides of bars 4 and tube 12, as indicated at 52 (Fig. 3). The block 43 can then be removed from the pump rod if in the way and replaced upon rods 42 to avoid chance of being misplaced. The bars 5 are then moved from the position shown in Fig. 1, to the position shown in Fig. 3.

If desired the pump head may be utilized as a means of support for the forward bars

of the frame. To accomplish this result the head of the pump is provided with a forward extension 53 provided with sockets 54 to receive the lower ends of bars 5' which bars will not be equipped with the feet 6. With the construction shown by Fig. 7, it is necessary that the cross or anchor bar 45, be disposed at the opposite side of the pump head from that shown in Fig. 1, because the tendency of the frame in such event is to move rearward, whereas in the construction shown in Fig. 1, its tendency is to move forward.

From the above description it will be apparent that I have produced a pumping jack embodying the features of advantage enumerated as desirable in the statement of the object of the invention, and I wish it to be understood that I do not wish to be restricted to the exact details of construction shown and described as obvious modifications will occur to one skilled in the art.

Having thus described the invention what I claim as new and desire to secure by Letters Patent is:—

1. In a device of the character described, a triangular jack comprising a tube, a second tube secured to and projecting perpendicularly from the first-named tube, a sleeve secured at the outer end of the second tube, a casting secured on the lower end of the first-named tube, a tie bolt connecting said casting with said sleeve, an arc secured upon the upper end of the first-named tube, and a tie bolt connecting said arc with said sleeve.

2. In a device of the character described, a triangular jack comprising a tube, a second tube secured to and projecting perpendicularly from the first-named tube, a sleeve secured at the outer end of the second tube, a casting secured on the lower end of the first-named tube, a tie-bolt connecting said casting with said sleeve, an arc secured upon the upper end of the first-named tube, a tie-bolt connecting said arm or arc with said sleeve, and a block pivotally suspended from said arc.

3. In a device of the character described, a triangular pumping jack, comprising a tube, a coupling mounted thereon, a second tube secured non-rotatably on the coupling and projecting perpendicularly therefrom, a sleeve secured non-rotatably upon the opposite end of said tube, an arc fitting non-rotatably upon the end of the first-named tube, means connecting said arc with said sleeve, a casting secured to the lower end of the first-named tube, and means connecting said casting with said sleeve to clamp the former on the first-named tube.

4. In a device of the character described, a triangular pumping jack, comprising a tube, a coupling mounted thereon, a second tube secured non-rotatably on the coupling and projecting perpendicularly therefrom, a



sleeve secured non-rotatably upon the opposite end of said tube, an arc fitting non-rotatably upon one end of the first-named tube, a U-shaped bolt extending through the arc and having its arms at opposite sides of said tube and extending through portions of said sleeve, nuts engaging the ends of the bolt, a casting upon the lower end of the first-named tube and provided in its underside with a recess, a U-shaped bolt engaging said recess and having its opposite ends extending through parts of the sleeve, and nuts engaging the ends of the bolt to clamp the casting upon the first-named tube.

5. In a device of the character described, a tube having its upper end bent to elliptical form, a T-coupling upon said tube provided with an elliptical stem, a tube having elliptical ends one of which engages said stem, a sleeve having an elliptical stem engaging the other elliptical end of said tube, an arc having an elliptical stem or socket engaging the

elliptical upper end of the first-named tube, a connection between said sleeve and said arc to clamp the latter on the first-named tube, a casting on the lower end of the first-named tube, and a connection between said casting and said sleeve to clamp the former on the lower end of the tube.

6. The combination of a supporting frame, a pumping jack hung in said frame and having at its lower corner a casting provided with notched edges, a second casting arranged against the first-named casting, fastening devices carried by the second-named casting and engaging the notches in the first-named casting, and draft devices pivotally attached to the said second casting.

In testimony whereof I affix my signature, in the presence of two witnesses.

JOHN R. WARE.

Witnesses:

G. Y. THORPE,  
H. C. RODGERS.