

A. PEERCY & E. M. BRETZ.

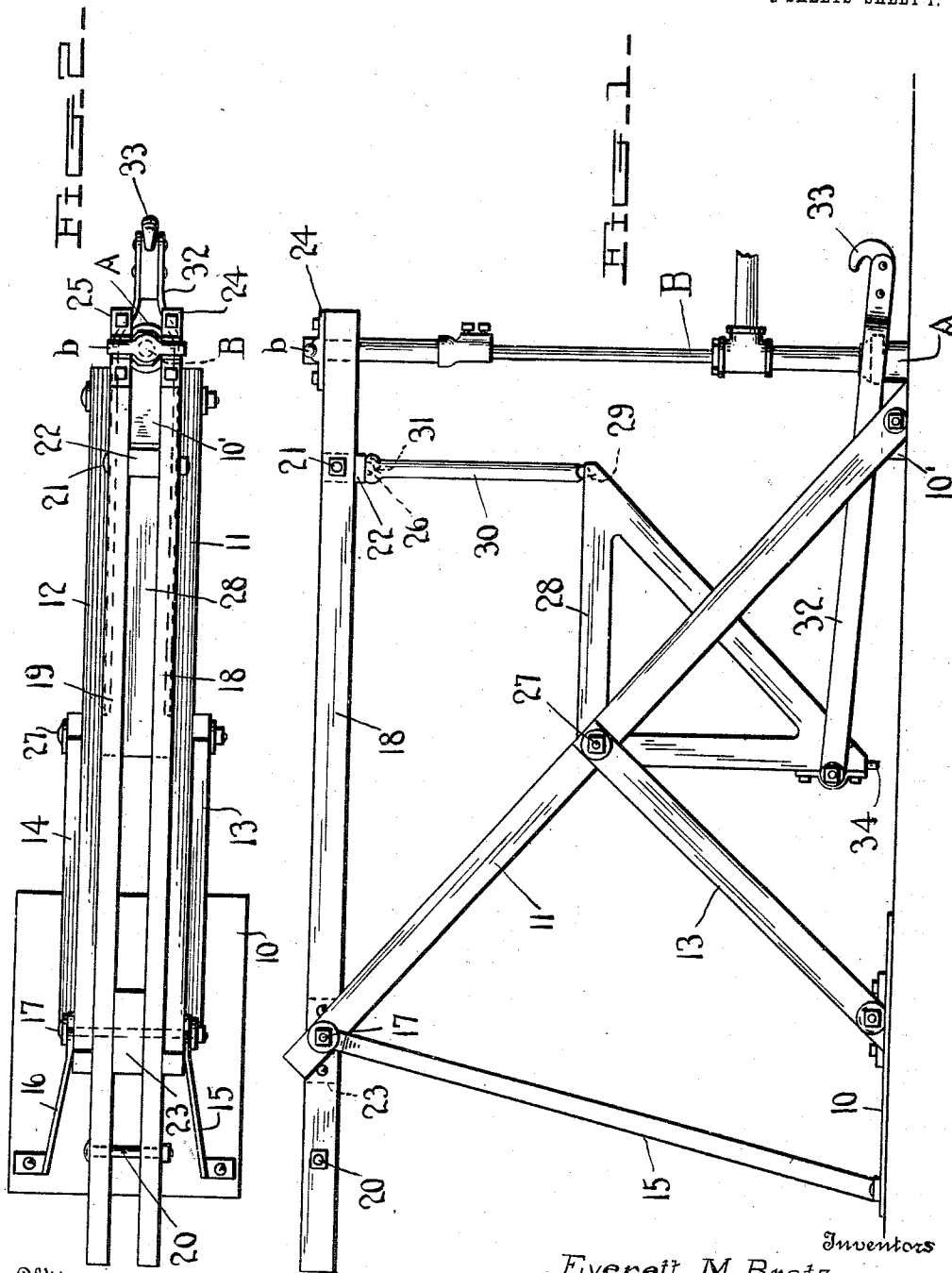
PUMPING JACK.

APPLICATION FILED FEB. 12, 1910.

Patented June 13, 1911.

2 SHEETS-SHEET 1.

995,032.



Witnesses

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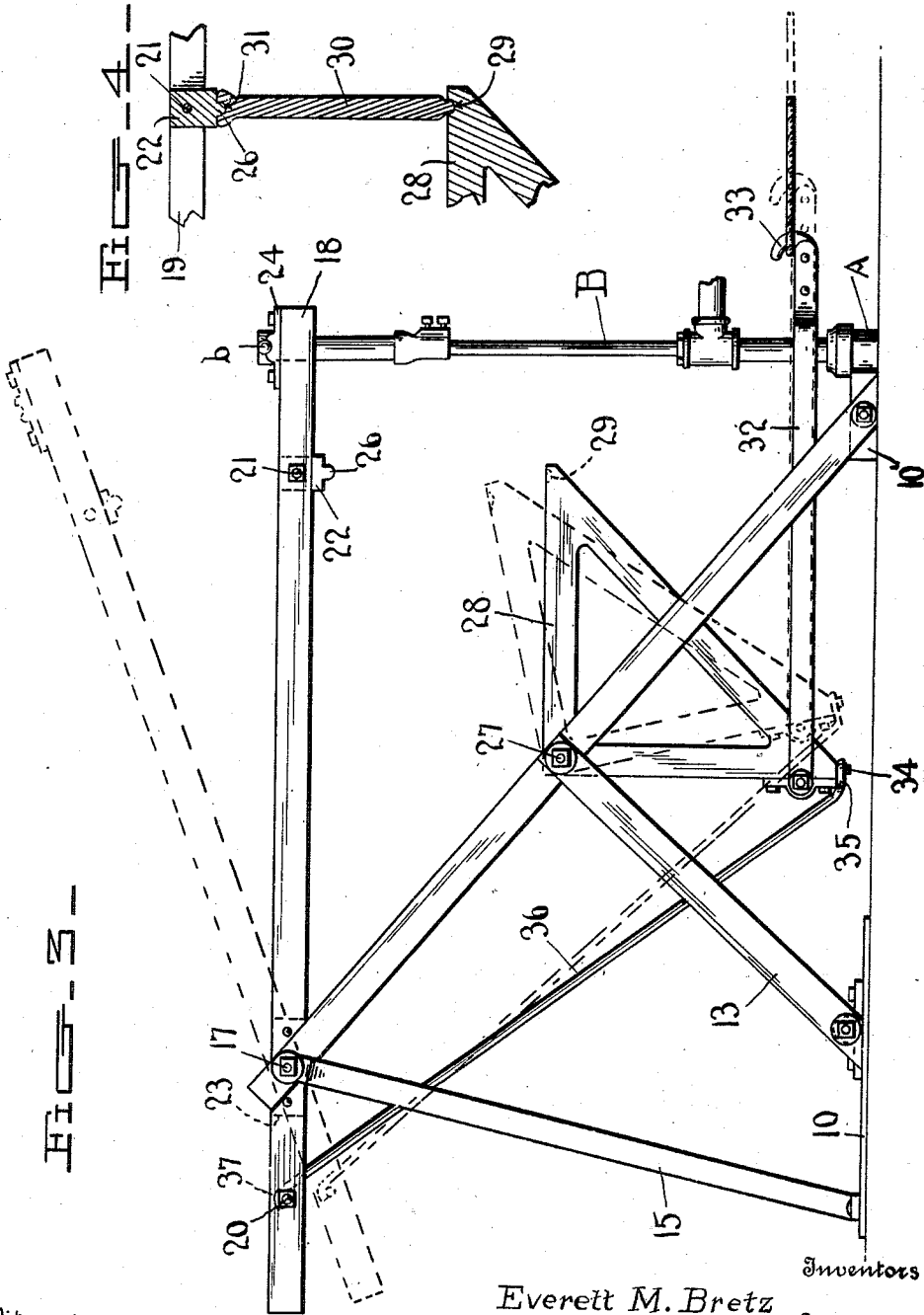
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UNITED STATES PATENT OFFICE.

ANDREW PEERCY AND EVERETT M. BRETZ, OF KIEFER, OKLAHOMA.

PUMPING-JACK.

995,032.

Specification of Letters Patent. Patented June 13, 1911.

Application filed February 12, 1910. Serial No. 543,480.

To all whom it may concern:

Be it known that we, ANDREW PEERCY and EVERETT M. BRETZ, citizens of the United States, residing at Kiefer, in the county of Creek, State of Oklahoma, have invented certain new and useful Improvements in Pumping-Jacks; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to pumping jacks and particularly that type which are utilized in connection with oil wells.

The object of the invention resides in providing an improved construction of pumping jack which is capable of producing, when operated, a much longer stroke of the polish-rod of an oil well than can be had by pumping jacks now in common use.

A further object of the invention is the provision of means whereby the jack may be easily and quickly detached from the polish-rod and the movable parts thereof shifted without disconnecting any portion of the jack so as to permit unobstructed access to the polish-rod, and well tubing by the workmen when it is desired to remove same from the well.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully described and set forth in the appended claim.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters of reference denote corresponding parts in the several views, and in which,

Figure 1 is a side elevation of a pumping jack constructed in accordance with the invention; Fig. 2, a plan view of same; Fig. 3, a view similar to Fig. 1 showing the jack in detached relation with respect to the polish-rod and the movable parts thereof shown in full lines in the position they would occupy prior to being shifted away from the polish-rod, and in dotted lines in the position they would occupy after being shifted to permit unobstructed access to the polish-rod and well tubing for the purpose of removing the latter, and, Fig. 4, a fragmental vertical section showing the connection between certain parts of the pumping jack.

Referring to the drawings, the well tubing is indicated generally by A, and the polish-rod which is actuated in said tubing by B. The upper end of the polish-rod B is provided with a cross arm *b* for a purpose to be presently described.

The pumping jack proper comprises a pair of spaced parallel inclined beams 11 and 12 having their lower ends secured to the base 10' in any suitable manner. Another pair of spaced beams 13 and 14 also have their lower ends secured to the base 10 in any suitable manner and are inclined toward the beams 11 and 12 and have their upper ends secured respectively to the latter and disposed against the outer faces thereof. The upper ends of the beams 11 and 12 are extended beyond their point of connection with the beams 13 and 14 and said extended ends are strengthened and supported by the brace rods 15 and 16 whose lower ends are secured to the base 10 and upper ends to the beams 11 and 12 respectively. A bolt 17 connects the brace rods 15 and 16 to the beams 11 and 12 and also forms a pivot bearing for a pair of parallel spaced beams 18 and 19 which are connected together rearward of the bolt 17 by a bolt 20 and at their forward ends by a bolt 21 which latter bolt also serves to secure a bearing lug 22 between said beams 18 and 19 to maintain the latter in proper spaced relation at their forward ends. A spacing block 23 is also secured between the beams 18 and 19 by means of the bolt 17; said block serving to maintain said beams in proper spaced relation at their rear ends in a manner corresponding to the bearing lug 22. Mounted upon the upper face of each of the beams 18 and 19 at their extreme outer ends are corresponding bearing plates 24 and 25 respectively each of which is provided with grooved bosses which form seats for the cross arm *b* to operatively connect the beams 18 and 19 with the polish rod B. The under face of the bearing lug 22 is provided with a rib 26 which extends transversely of the beams 18 and 19, the purpose of which will presently appear. A bolt 27 which connects the beams 13 and 14 to the beams 11 and 12 also serves as a pivot bearing for a bell crank lever 28. One arm of said bell crank lever 28 is provided with a recess 29 and a pitman 30 has its lower end seated in the recess 29 and its upper end provided with a groove 31 in which

is adapted to be seated the rib 26 of the bearing lug 22.

From the construction just described it will be apparent that when the pitman 30 is disposed in the position shown in Fig. 1 any rocking of the bell crank lever 28 will cause a similar rocking to be imparted to the beams 18 and 19 through the instrumentality of the pitman 30 and thus actuate the polish rod B and effect the pumping action. It will be further apparent that by reason of the connection effected by the pitman 30 between the bell crank 28 and the beams 18 and 19 a much longer stroke can be imparted to the bell crank 28 and a corresponding increase of stroke to the polish rod B than could possibly be imparted if the bell crank were connected directly to the polish rod.

The depending arm of the bell crank lever 28 is operatively connected at its lower end with one end of the actuating rods 32 which are shown extended approximately in a horizontal plane past opposite sides respectively of the tubing A and having a hook 33 secured therebetween at their other end whereby said actuating rods may be connected with an engine or motor (not shown) for the purpose of mechanically rocking the bell crank lever 28 and effecting the pumping operation in the manner heretofore described.

In order to move the bell crank 28 and the beams 18 and 19 out of proximity to the polish-rod B and tubing A to permit unobstructed access to the latter for the purpose of removing same from the well the following structure is resorted to. Secured to and depending from the lowermost portion of the bell crank 28 is a pin 34 which is adapted to enter an eye 35 formed on the lower end of a reach rod 36; the upper end of said rod being bent to form a hook 37 adapted to pass between the beams 18 and 19 and engage the bolt 20. It will thus be apparent that after first removing the detachable pitman from between the bell crank 28 and the lug bearing 22, the rocking of said bell crank from the position shown in full

lines in Fig. 3, to the position shown in dotted lines will effect a raising of the beams 18 and 19 through the instrumentality of the reach rod 36, it being understood that a sufficient rocking movement is imparted to the bell crank 28 to shift same and the beams 18 and 19 to a position where they will not obstruct the operation of removing the polish-rod and tubing from the well. In order to detach the beams 18 and 19 and polish-rod it is necessary to rotate said rod a quarter turn when the arm 6 will be disposed longitudinally of the beams 18 and 19 so that when said beams are raised the cross arm will pass therebetween and said movement of the beams will be without effect on the polish-rod. To return the jack to a condition for further pumping it is only necessary to remove the reach rod 36; reconnect beams 18 and 19 and the polish-rod and reseat the pitman 30.

What is claimed is:

A pumping jack comprising a frame, a walking beam fulcrumed in the frame and having a polish rod connection at one end, an angle lever fulcrumed in the frame and including an arm depending from its fulcrum and the arm at right angles thereto and extending in the direction of the polish rod connection, a pull rod connected adjacent the extremity of the depending arm, a link removably connected with the extremity of the depending arm and with the walking beam adjacent to its fulcrum and at the opposite side thereof from the polish rod connection, and a removable pitman connection between the free end of the other arm of the angle lever and the walking beam at the opposite side of the fulcrum of the beam from the link and at a greater distance therefrom than said link.

In testimony whereof, we affix our signatures in presence of two witnesses.

ANDY PEERCY.
EVERETT M. BRETZ.

Witnesses:

R. O. BAILEY,
S. E. BAILEY.