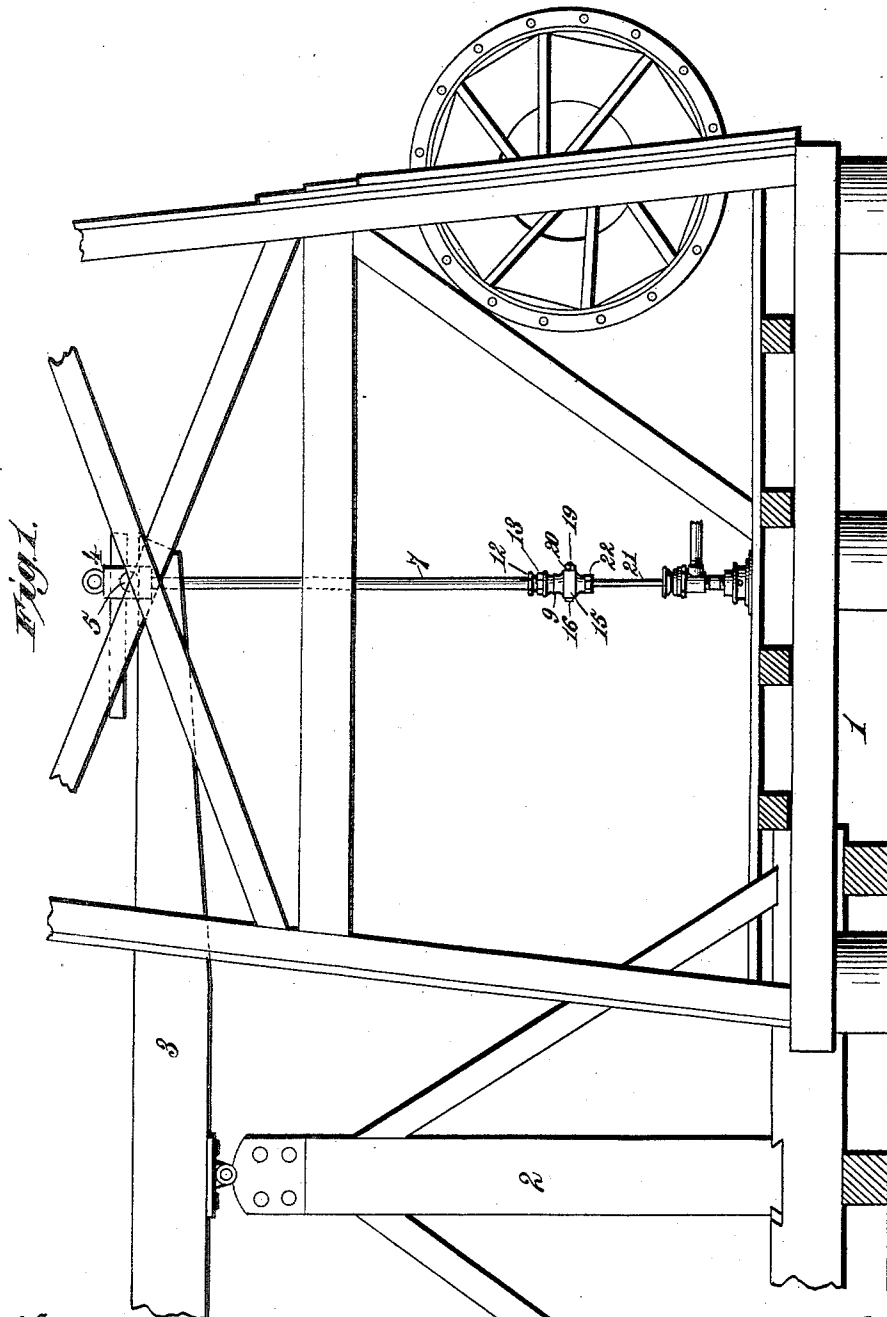


(No Model.)

2 Sheets—Sheet 1.

M. TURTON.  
APPARATUS FOR REMOVING PARAFFINE FROM THE PIPES OF OIL WELLS  
No. 445,100. Patented Jan. 20, 1891.



Witnesses.  
*Robert Condit,*  
*J. A. Rutherford.*

Inventor,  
*Mordecai Turton.*  
By *James L. Norris,*  
*Att'y.*

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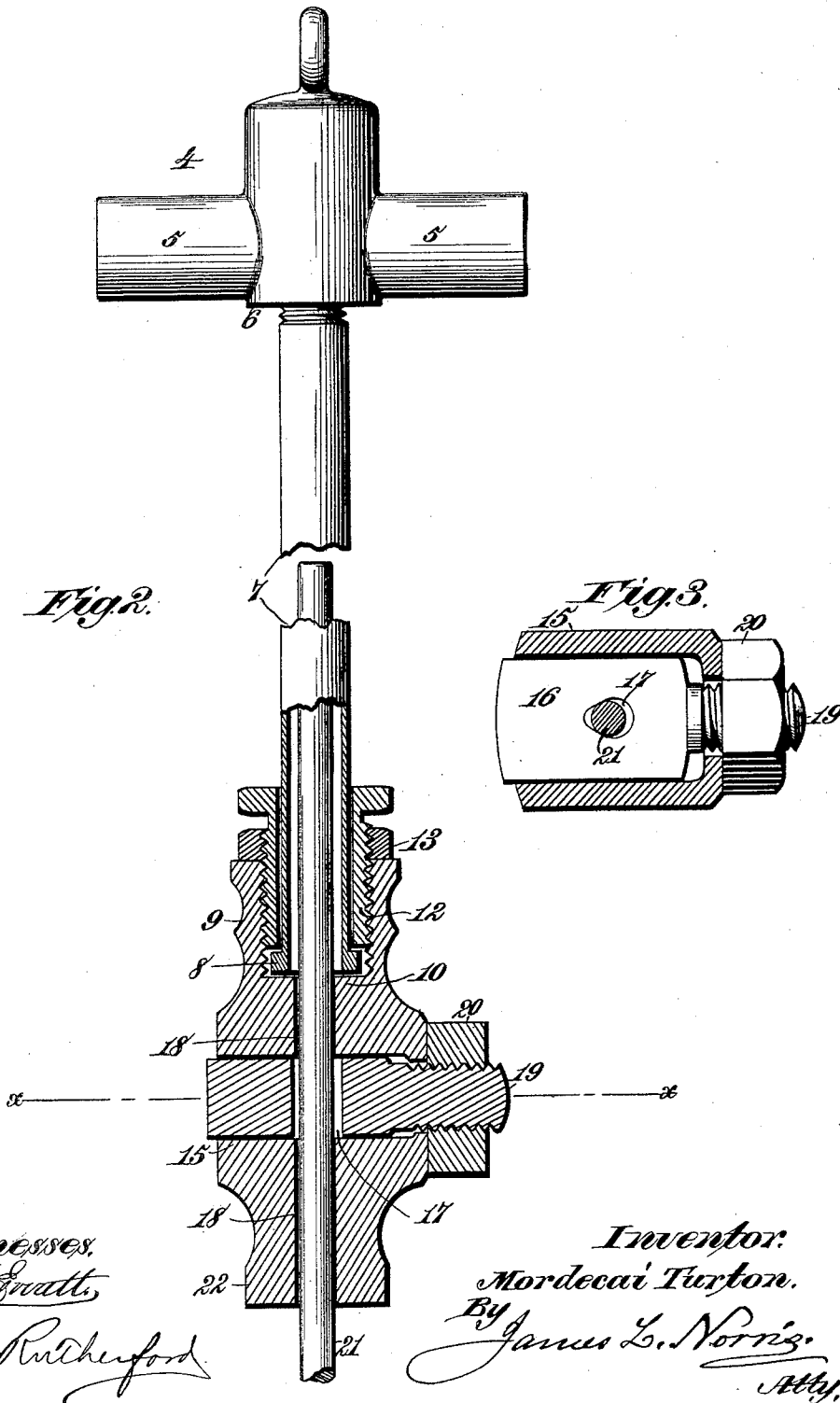
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*Fig. 2.*

*Fig. 3.*

*Witnesses:*  
*Chas. Swatt,*

*J. A. Rutherford.*

*Inventor:*  
*Mordecai Turton.*  
*By James L. Norris.*  
*Atty.*

# UNITED STATES PATENT OFFICE.

MORDECAI TURTON, OF LIMA, OHIO, ASSIGNOR OF ONE-HALF TO THOMAS G. LANEY, OF SAME PLACE.

APPARATUS FOR REMOVING PARAFFINE FROM THE PIPES OF OIL-WELLS.

SPECIFICATION forming part of Letters Patent No. 445,100, dated January 20, 1891.

Application filed October 13, 1890. Serial No. 367,976. (No model.)

*To all whom it may concern:*

Be it known that I, MORDECAI TURTON, a citizen of the United States, residing at Lima, in the county of Allen and State of Ohio, have invented new and useful Improvements in Apparatus for Removing Paraffine from the Pipes of Oil-Wells, of which the following is a specification.

My invention relates to devices for removing paraffine from the tubing of oil-wells; and the purpose thereof is to provide a simple and easily-operated mechanism by which this result may be attained without removing the rods from the well, and whereby, also, the swivel-joint may be conveniently located and the necessity of ascending to the cross-head of the walking-beam obviated.

It is my purpose, also, to combine with the grip, within one end of which the swivel-joint is located, a solid plug having an opening of substantially ovoid form to receive the polished rod, said plug being drawn by an external nut in such direction as to force the rod into the narrower portion of said opening, whereby it has bearing upon two opposite or nearly opposite points of said ovoid opening, and is wedged therein in such manner as to afford a strong and rigid grip upon said rod.

Finally, it is one purpose of my invention, also, to provide a simple apparatus whereby the operation of the pump and the loosening and breaking up of the paraffine in the pipe may be carried on simultaneously and without arresting the action of the pump, as has been necessary heretofore.

To these ends the invention consists in the several novel features of construction and new combinations of parts hereinafter fully set forth, and then specifically pointed out in the claims following this specification, the same being an improvement upon the invention shown and described in the Letters Patent granted to me, dated the 1st day of April, 1890, No. 424,837.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same in detail, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of an ordinary

pumping rig or mechanism in which my invention is embodied. Fig. 2 is a sectional elevation, upon an enlarged scale, showing the parts comprising said invention. Fig. 3 is a sectional view of the plug holding the polished rod, together with the casing, the section being taken on the line *x x*, Fig. 2.

In the said drawings, the reference-numeral 1 denotes the foundation-frame of an ordinary pumping-rig, and the numeral 2 designates the samson-post, upon which the walking-beam 3 is mounted. Upon the end of this walking-beam is mounted the cross-head 4, having trunnion-supports 5, which rest in suitable seats upon the end of the beam. Depending from the central portion of this cross-head is a short tubular section 6, into which is screwed the pipe 7, formed of suitable metal and having a diameter of about one and one-half inch. At its lower end this pipe, which is about ten feet in length, is provided with a collar 8, for a purpose now to be set forth.

The numeral 9 denotes a grip or coupling consisting of a block of metal having in its upper end an opening of such diameter as to freely admit the collar 8 upon the pipe 7, and provided also at a point somewhat below the mouth of said opening with an internal shoulder 10, upon which the collar 8 may rest. Above this internal shoulder 10 the opening in the coupling is provided with a female thread, with which a threaded sleeve 12, loose on the pipe 7, may have engagement, its end being adapted to lie just above the upper edge of the collar 8 and confine the same between it and the internal shoulder 10, the connection being such that the coupling 9 is free to turn in either direction upon the swivel-joint thus formed. In order to prevent the displacement of the threaded sleeve 12, a jam-nut 13 is turned thereon against the head upon the upper end of the coupling.

Between the ends of the coupling 9 is formed an integral box or casing 15, having a rectangular opening upon one side and a circular opening upon the other, the former being adapted to receive a plug consisting of a rectangular block of metal 16, having an ovoid opening 17, which lies substantially in the

line of a central vertical opening 18 in the coupling. Upon the end of the plug 16 is a threaded bolt 19, which projects through the circular opening in the coupling and receives a nut 20. The polished rod 21 of the pump passes through said coupling, through the ovoid opening in the plug, and upward into the pipe 7. This rod is securely clamped by the plug 16, which by reason of the peculiar shape of its opening through which the rod passes has a wedging action thereon, a double point of contact instead of one single point being afforded. Moreover, as the wedging or ovoid opening is formed wholly within the block of metal forming the plug and being surrounded by the solid metal of the block upon all sides no strain whatever is imposed upon the parts within which the plug is fitted, nor can the latter be spread so as to exert any lateral strain upon the parts of the coupling, whereby all strain imposed upon said opening is taken up by the rectangular portion of the plug, none being communicated to the coupling.

Upon the lower end of the coupling is formed a polygonal head 22, adapted to receive a monkey-wrench or other tool by which the coupling, together with the polished rod clamped therein, may be given rotary motion, whereby the adhering paraffine upon the interior of the pipe may be loosened and pumped up with the oil. This motion, however, may be communicated in various other ways, and I do not confine my invention to any specific method of producing the same.

It should be noted that I do not limit my invention to the specific mechanism shown for reciprocating the pump-rod or imparting axial rotation thereto, as I may employ any device suitable for such purposes. The several features of invention hereinbefore set forth may also be modified in other respects without in any manner departing from my invention, one essential feature of which is to provide an apparatus by which the operation of the pump and the loosening and breaking up of the paraffine adhering to the pipe may be carried on simultaneously and without stopping the pump, as has been heretofore necessary.

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

1. The combination, with the walking-beam of a cross-head having trunnion-arms and provided with a pipe depending from said cross-head, of a coupling swiveled upon said pipe, the latter being provided with a collar lying against an internal shoulder in the coupling and between the same and a threaded sleeve loose on said pipe and adapted to engage a female screw-thread in said coupling above the internal collar, substantially as described.

2. The combination, with a cross-head having a rigid depending pipe provided with a collar at its lower end, of a coupling having an opening interiorly threaded and an internal shoulder below said threads upon which the collar on the tube rests, a threaded sleeve loose upon the tube above said collar and having a rigid head and a jam-nut, a plug entering the coupling transversely and having a threaded bolt projecting from one side of said coupling and adapted to receive a nut, and a polished rod traversing said coupling and entering the tube and passing through an ovoid opening in the solid body of the plug, substantially as described.

3. The combination, with a walking-beam of a cross-head having trunnion-arms and provided with a pipe depending from said cross-head, of a coupling swiveled upon said pipe, the latter having a collar lying between an internal shoulder in the coupling and a threaded sleeve loose on said pipe and adapted to engage a screw-thread in the coupling, and a plug consisting of a block of metal lying in a recess in said coupling and having an ovoid opening entirely surrounded by the solid metal of the block to receive the polished rod, and provided, also, with a threaded bolt projecting outside the coupling to receive a nut by which the block is adjusted to clamp the rod between the converging sides of the ovoid opening, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

MORDECAI TURTON.

Witnesses:

THOS. G. LANEY,  
J. C. RIDENOUR.