

No. 736,223.

PATENTED AUG. 11, 1903.

T. CRONIN.  
PITMAN.

APPLICATION FILED JAN. 10, 1903.

NO MODEL.

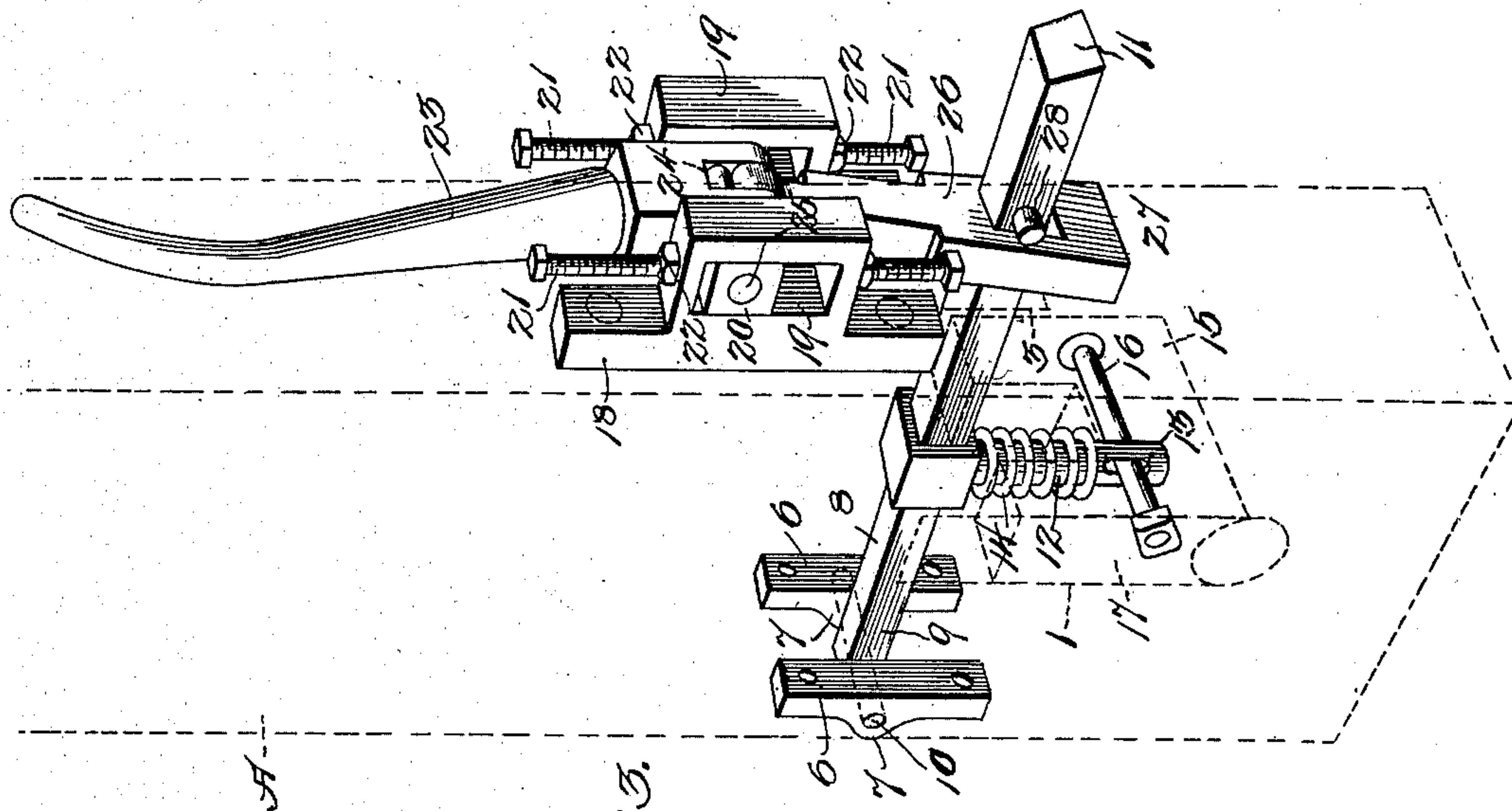


Fig. 3.

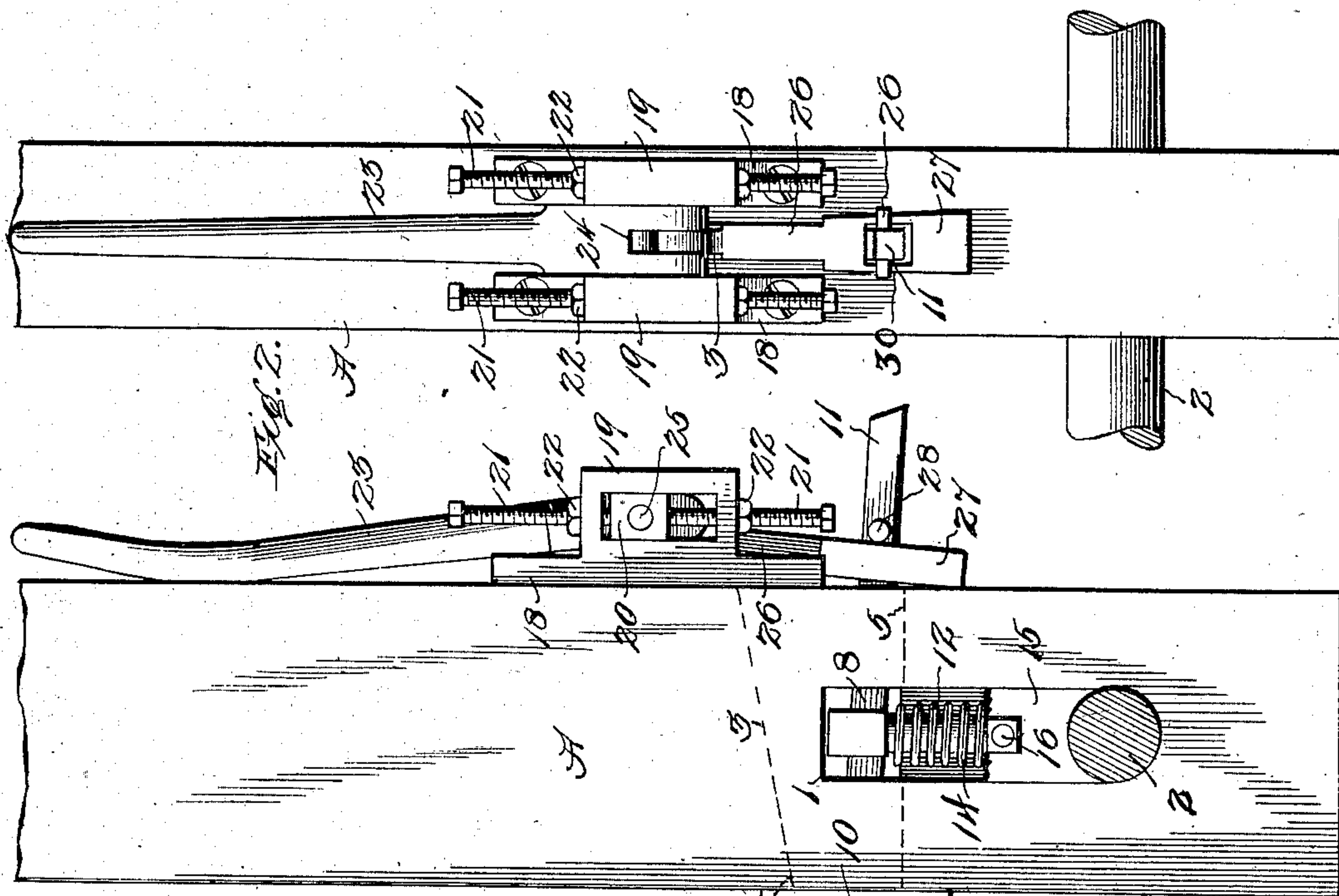


Fig. 2.

Witnesses  
D. A. Knochner  
Walter T. Estabrook

Fig. 1.

Inventor  
Thomas Cronin  
by *Thos. G. W. Baird & Co.*  
his Attorneys



## UNITED STATES PATENT OFFICE.

THOMAS CRONIN, OF MARIETTA, OHIO.

## PITMAN.

SPECIFICATION forming part of Letters Patent No. 736,223, dated August 11, 1903.

Application filed January 10, 1903. Serial No. 138,461. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS CRONIN, a citizen of the United States, and a resident of Marietta, in the county of Washington and State of Ohio, have invented a new and useful Improvement in Pitmen, of which the following is a specification.

My invention relates to an improvement in pitmen, and is designed more particularly for those pitmen used in boring and drilling oil and Artesian wells, although I do not confine my invention entirely to this art, as it is applicable in many other relations and wherever a pitman is used.

The objects of my invention are the provision of a pitman or other connecting rod which can be easily and quickly applied to or released from engagement with a crank or wrist pin, which latter may be connected to the driving-shaft or other source of power.

Furthermore, my invention is simply and easily constructed at a minimum of expense and labor; and it consists of a binding or clamping means applied to the crank or wrist pin or stud for retaining it immovable with relation to the pitman or other connecting rod, the clamping means being applied or released by means of a self-locking lever actuated by hand, the main object being to provide a means whereby the operator may connect or release the pitman or other rod with or from the driving means whenever desirable or necessary.

My invention further consists of certain other novel details of construction and combinations of parts, such as will be more fully described hereinafter, and particularly set forth in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation of one end of a pitman with my improvements applied thereto. Fig. 2 is a view from one edge, and Fig. 3 is a detail perspective view of my improvement detached from the pitman.

A indicates the pitman, which is provided with an elongated aperture 1, extending there-through and longitudinally thereof. This slot or aperture is adapted and intended to receive the wrist or crank pin 2, secured to any suitable driving mechanism—as a shaft, for instance. A second slot or aperture 3 is

formed in the pitman and extends transversely of slot 1, which it intersects at its upper end. The end 4 of the slot 3 is smaller than is the opposite end 5.

Secured to the outer surface of the pitman and upon each side of the end 4 of slot 3 are a pair of bearing-plates 6 6, the bosses 7 7 of which are perforated. A lever 8 extends through slot 3, its rear end 9 having a hole to receive pin or bolt 10, held in the bosses 7 7 of the bearing-plates 6 6. The opposite end 11 of the lever 8 passes out through the wider mouth 5 of slot 3, which permits it to have a wide range of oscillatory movement.

Carried by the lever 8 and located within the slot 1 is a depending pin 12, the upper end of which is loosely supported upon the lever 8. The lower end of this pin is slotted, as at 13, and surrounding the pin is a strong spring 14. The clamping-block 15, of any suitable material which will afford a considerable amount of frictional surface, such as wood, is secured to the lower end of pin 12 by means of a bolt 16. This clamping-block is curved upon its lower face to fit and embrace the wrist or crank pin and is provided at its upper end with a pair of oppositely-disposed upstanding lugs 17 17, between which the lower slotted end of pin 12 is received. The lugs 17 17 are apertured to permit the passage of the fastening-bolt 16 therethrough and through the slot 13 in the pin, whereby to removably secure the clamping or bearing block to the depending pin. This removable feature is made necessary by the fact that the block is subject to much wear, and consequently it is not only desirable, but necessary, that new blocks should be substituted for the old or worn-out blocks from time to time. The spring 14 at its upper end bears against the lever 8 and at its lower end against the block 15, the object of which is to afford a certain amount of play or take-up between the crank-pin and the pitman, whereby any regular movement may be obviated and yet permit the clamping-block to retain the pitman and crank or wrist pin tightly connected to cause the pitman to be operated thereby.

Located above the wide mouth 5 of slot 3 are a pair of adjustment-bearings 18 18, spaced

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apart from each other, and these adjustment-bearings are each provided with elongated boxes 19 19, adapted to receive movable blocks 20 20, which are adjustably supported in the boxes by means of set-screws 21 21, each of which is provided with a lock-nut 22. These set-screws pass through the boxes and their ends engage the movable blocks on opposite side.

10 A hand-lever 23, having a forked end 24, is provided with a pivot-pin 25, passing through its forked end, the ends of the pivot-pin being received in the movable blocks 20 20, whereby the position of the lever may be regulated.

Pivotally secured to the forked end 24 of the hand-lever 23 and between its walls is a link 26, the lower end 27 of which has an opening 30, through which passes the protruding end 11 of the lever 8, a removable pin or stud 28 passing through the lever 8 outside the link 26 to retain the loose connection of the link and lever.

Having thus fully described my invention, 25 I will briefly set forth the operation.

The pitman A is secured at its upper end to any suitable walking-beam, (not shown,) the lower end of the pitman projecting into proximity to the driving mechanism, (not shown,) which mechanism is provided with a wrist or crank pin 2. The crank-pin is received within the slot 1, formed in the lower end of the pitman. When the driller or operator desires to secure the pitman to the wrist-pin, he forces the hand-lever 23 upward and against the side or face of the pitman. Now it will be seen from the drawings that the pivotal point of the lever 23 is outside of the vertical plane of the upper portion of the hand-lever and the point of connection of the link 26 and lever 8, thus forming a sort of toggle comprising the hand-lever and link and preventing any accidental movement of the hand-lever tending toward a release thereof. The upward movement of the hand-lever 23 forces the link 26 downward on account of the fact that the link is pivotally secured to the extreme end of the hand-lever, while the latter is pivotally held at a point nearer the center thereof. The downward movement of the link 26 carries with it the lever 8, which supports the depending pin 12, carrying the clamping-block 15, of wood or any other suitable material, located within slot 1. This operation forces the clamping-block tightly against the wrist-pin 2 and serves to connect the pitman securely therewith in order to drive the walking-beam. When the operator desires to release the pitman from the wrist-pin for the purpose of temporarily ceasing drilling operations in order to bail out the well or for any other reason, he pulls the hand-lever outward and downward, whereupon a reversal of the above-described movements takes place, culminating in the ascent of the clamping-block and the release of the

pitman from the wrist-pin. The pitman can then be swung off the wrist-pin, if desired.

The adjustment of the pivotal point of the lever—that is to say, of the movable blocks 20 20—is for the purpose of causing an adjustment in the “throw” or movement of the link 26, and consequently of the lever 8, secured thereto. The blocks are moved upward in their boxes when the bearing or clamping block 15 is new, and as it becomes worn by the friction of the wrist-pin therewith the movable blocks 20 20 are moved downward in order that the depression of lever 8 may be greater. The spring 14 also serves to take up a portion of the wear of the clamping or wear block. It will also be noted that the upper end of the hand-lever 23 is inclined inwardly and then outwardly, the object being to afford the toggle action above described and yet permit of its being readily grasped by the operator.

It is evident that many changes might be made in the form and arrangement of the parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth; but,

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a pitman having a slot formed therein adapted to receive a wrist-pin, of a lever passing through the slot, a depending pin carried by the lever, a clamping-block secured to the depending pin, a spring bearing against the clamping-block and means for operating the lever.

2. The combination with a pitman adapted to removably receive a wrist-pin, of a lever, a depending pin carried thereby, a clamping-block loosely secured to the pin and adapted to have a slight movement with respect thereto, a tension means bearing against the clamping-block to retain it at its extreme limit of movement with respect to the depending pin and means for operating the lever.

3. The combination with suitable connecting means adapted to removably receive a wrist-pin, of a lever, cushioned means supported by the lever and adapted to removably engage the wrist-pin, and a toggle-jointed hand-lever connected to and adapted to operate the first-named lever.

4. The combination with suitable connecting mechanism adapted to removably engage a driving means, of a cushioned clamping member, a lever connected with the member, a link secured to the lever and a hand-operated lever toggle-jointed to the link, the pivotal point of the hand-operated lever capable of adjustment.

5. The combination with a suitable connecting mechanism adapted to removably engage a driving means, of a clamping member, a lever connected therewith, a link connected with the lever, a pair of bearing-plates, boxes



5 formed thereon, movable blocks received in the boxes, means for adjustably retaining the blocks in the boxes, a pivot-pin supported in the blocks, and a hand-lever carried by the pivot-pin.

10 6. The combination with a suitable connecting mechanism adapted to removably engage a driving means, of a clamping member, a lever connected therewith, a link removably connected with the lever, a pair of bearing-plates, boxes formed thereon, movable blocks received in the boxes, means for adjustably retaining the blocks in the boxes, a pivot-pin supported in the blocks, and a hand-lever carried by the pivot-pin.

15 7. The combination with a suitable connecting mechanism adapted to removably engage a driving means, of a clamping member, a lever connected therewith, a link connected loosely

with the lever, a hand-lever, the fulcrum-point 20 of which is located in a vertical plane outside that of the point of connection of the link and the first-named lever, the hand-lever so formed that its free end may assume a position substantially in the same plane with the 25 point of connection of the link, and first-named lever, the link and hand-lever connected at a point beyond the pivotal point of the hand-lever whereby the hand-lever may automatically retain the parts in locked position. 30

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THOMAS CRONIN.

Witnesses:

I. M. BUTTS,  
W. E. SYKES.