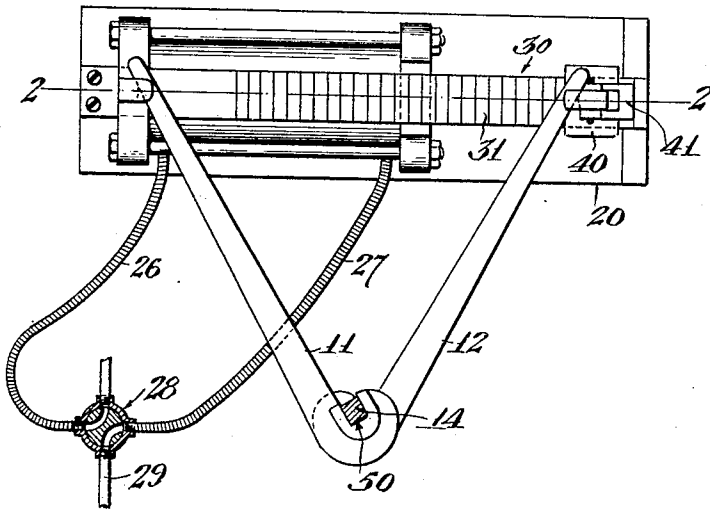


L. A. ANDERSON.  
JACK,  
APPLICATION FILED MAR. 1, 1920.

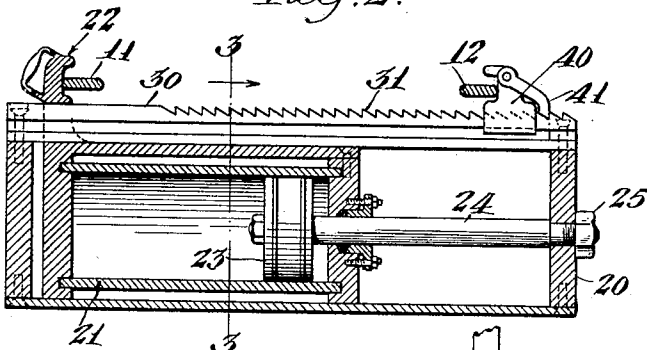
1,386,220.

Patented Aug. 2, 1921.

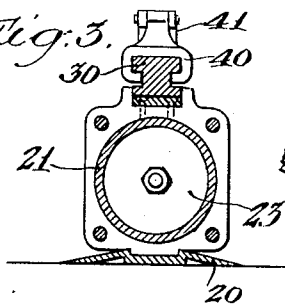
*Fig. 1.*



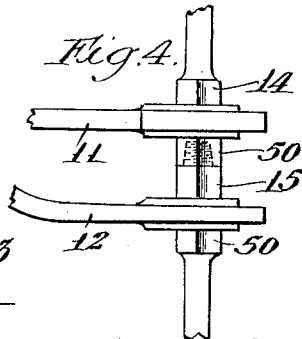
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



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*Attorneys.*

# UNITED STATES PATENT OFFICE.

LEONARD A. ANDERSON, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-HALF TO  
ROSCOE MOSS, OF LOS ANGELES, CALIFORNIA.

JACK.

1,386,220.

Specification of Letters Patent.

Patented Aug. 2, 1921.

Application filed March 1, 1920. Serial No. 362,607.

*To all whom it may concern:*

Be it known that I, LEONARD A. ANDERSON, a citizen of the United States, residing at Los Angeles, Los Angeles county, and State of California, have invented a new and useful Improvement Comprising the Jack disclosed in the following specification.

My invention relates to the art of drilling wells and the principal object of the invention is to provide means for unscrewing and screwing up the tool joints used in drilling.

Further objects and advantages will be made evident hereinafter.

Referring to the drawings which are for illustrative purposes only, Figure 1 is a plan view of my invention showing the method of operation.

Fig. 2 is a section on a plane represented by the line 2—2 Fig. 1.

Fig. 3 is a section on a plane represented by the line 3—3 of Fig. 2.

Fig. 4 is an enlarged view of the tool joints with the wrenches shown in place thereon.

In the form of the invention illustrated in the drawings, the jack is shown applied to wrenches 11 and 12, operating tool joints 14 and 15. The jack consists of a frame 20 in which a cylinder 21 is free to slide; this cylinder having a movable chock 22 rigidly secured thereto. A piston 23 is rigidly secured to a piston rod 24 which in turn is secured by means of a nut 25 in the frame 20.

Flexible hose 26 and 27 fed with fluid through a four way valve 28 from a supply hose 29 is also provided, the hose 26 being connected into one end of the cylinder 21 and the hose 27 being connected into the other end. A bar 30 having serrations 31 in the top thereof is secured in the frame 20, and a movable chock 40 slides thereon, this chock being provided with a dog 41 for engaging the serrations 31.

The method of operation is as follows:

The wrenches 11 and 12 being placed on the square shanks 50 of the tool joints 14 and 15, the handles of these wrenches are carried over and seated on the chocks 22 and 40. If now fluid pressure is admitted through the hose 27, the cylinder 21 moves in the frame 20 forcing the chock 22 toward the wrenches 11 and 12, these wrenches being forced together.

The same type of movement is used both in screwing up and unscrewing the tool joints 14 and 15, the wrenches being transposed on the tool joint to accomplish the desired result, that is to say, if the wrench 11 is on the lower tool joint 15, the tool joint would be unscrewed whereas if the wrench is placed on the upper tool joint 14, the tool joints will be screwed together. The dog 41 is provided so that the chock 40 can be moved up until the wrench 12 is tight against the chock 40.

I claim as my invention:—

1. A jack for tool joints comprising a frame; a chock for receiving a wrench handle; means for securing said chock to said frame; a movable chock for receiving a wrench handle; a cylinder; a piston in said cylinder; means for securing said piston to said frame; and means for securing said cylinder to said movable chock.

2. A jack for tool joints comprising a chock for receiving a wrench handle; means for securing said chock at any one of several positions in said frame; a movable chock for receiving a wrench handle; a cylinder; a piston in said cylinder; means for securing said piston to said frame; and means for securing said cylinder to said movable chock.

3. A jack for tool joints comprising a frame, a cylinder mounted to slide freely in said frame, a movable chock rigidly attached to said cylinder, a piston in said cylinder, a piston rod rigidly connecting said piston with said frame, a bar rigidly secured to said frame, serrations formed on said bar, an adjustable chock sliding freely on said bar, a dog pivoted in said chock and engaging said serrations, a four way valve, flexible hose connecting either end of said cylinder with said four way valve, and means for supplying fluid pressure to said valve.

4. A jack for tool joints comprising a frame, a cylinder mounted to slide freely in said frame, a movable chock rigidly attached to said cylinder, a piston in said cylinder, a piston rod rigidly connecting said piston with said frame, a bar rigidly secured to said frame, serrations formed on said bar, an adjustable chock sliding freely on said bar, a dog pivoted in said chock and engaging said serrations, and means for supplying fluid pressure to either end of said cylinder.

5. A jack for tool joints comprising a frame, a cylinder mounted to slide freely in

- said frame, a movable chock rigidly attached to said cylinder, a piston in said cylinder, a piston rod rigidly connecting said piston with said frame, an adjustable chock sliding on said frame, means for securing said adjustable chock to said frame in any one of several positions, a four way valve, flexible hose connecting either end of said cylinder with said four way valve, and means for supplying fluid pressure to said valve.
6. A jack for tool joints comprising a frame, a cylinder mounted to slide freely in said frame, a movable chock rigidly attached to said cylinder, a piston in said cylinder, a piston rod rigidly connecting said piston with said frame, an adjustable chock sliding on said frame, means for securing said adjustable chock to said frame in any one of several positions, and means for supplying fluid pressure to either end of said cylinder.
7. A jack for tool joints comprising a frame, a chock movable with relation to said frame, a cylinder, a piston in said cylinder, means by which a force exerted between said piston and said cylinder is applied between said movable chock and said frame, a bar rigidly secured to said frame, serrations formed on said bar, an adjustable chock sliding freely on said bar, a dog pivoted in said chock and engaging said serrations, a four way valve, flexible hose connecting either end of said cylinder with said four way valve, and means for supplying fluid pressure to said valve.
8. A jack for tool joints comprising a frame, a chock movable with relation to said frame, a cylinder, a piston in said cylinder, means by which a force exerted between said piston and said cylinder is applied between said movable chock and said frame, a bar rigidly secured to said frame, serrations formed on said bar, an adjustable chock sliding freely on said bar, a dog pivoted in said chock and engaging said serrations, and means for supplying fluid pressure to either end of said cylinder.
9. A jack for tool joints comprising a frame, a chock movable with relation to said frame, a cylinder, a piston in said cylinder, means by which a force exerted between said piston and said cylinder is applied between said movable chock and said frame, an adjustable chock sliding on said frame, means for securing said adjustable chock to said frame in any one of several positions, a four way valve, flexible hose connecting either end of said cylinder with said four way valve, and means for supplying fluid pressure to said valve.
10. A jack for tool joints comprising a frame, a chock movable with relation to said frame, a cylinder, a piston in said cylinder, means by which a force exerted between said piston and said cylinder is applied between said movable chock and said frame, an adjustable chock sliding on said frame, means for securing said adjustable chock to said frame in any one of several positions, and means for supplying fluid pressure to either end of said cylinder.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 18th day of February 1920.

LEONARD A. ANDERSON.