

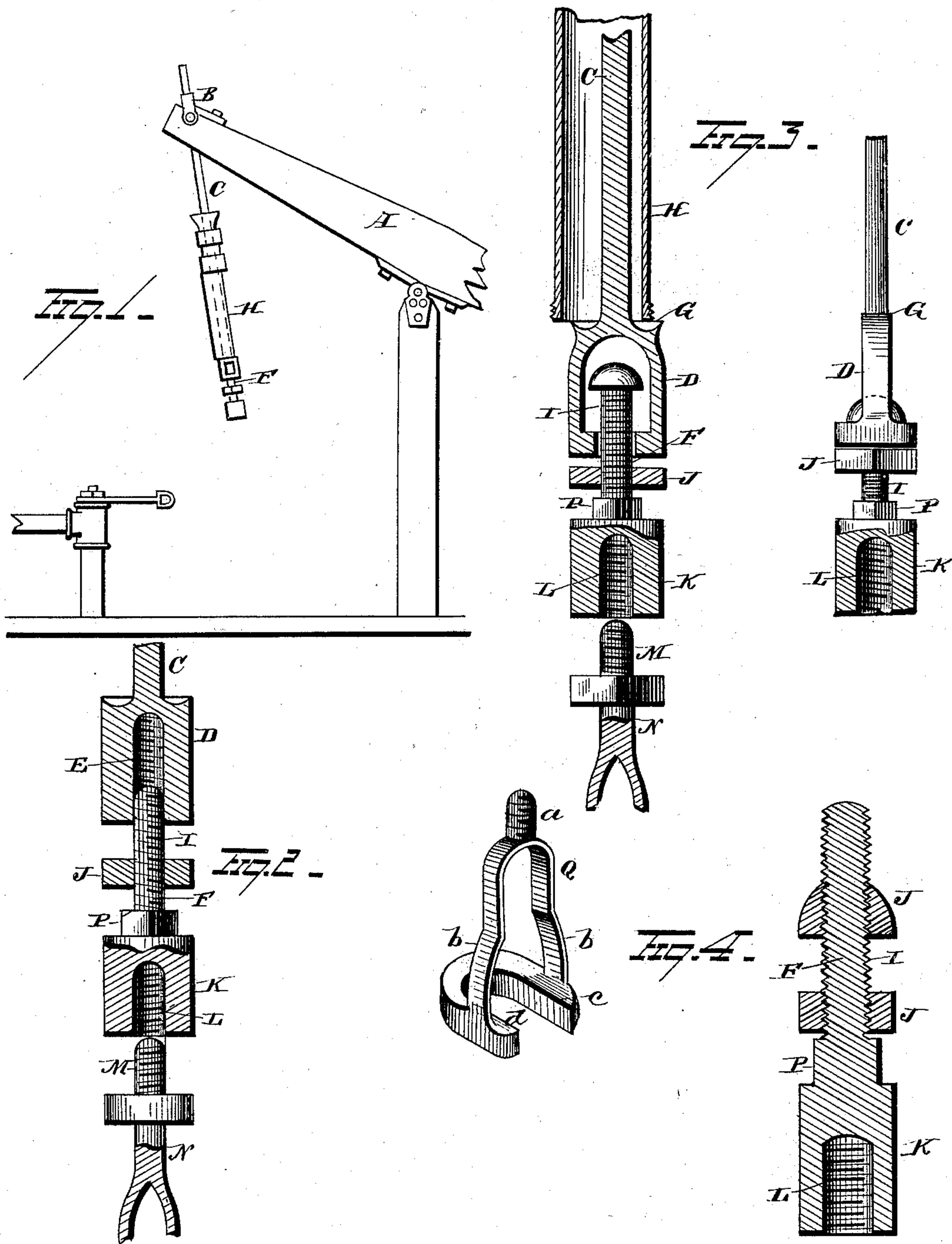
(No Model.)

E. P. SHETTER.

CONNECTION FOR POLISH AND PUMP RODS.

No. 257,394.

Patented May 2, 1882.



WITNESSES

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CONNECTION FOR POLISH AND PUMP RODS.

SPECIFICATION forming part of Letters Patent No. 257,394, dated May 2, 1882.

Application filed October 22, 1881. (No model.)

To all whom it may concern:

Be it known that I, EGBERT P. SHETTER, of Bullion, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Connections for Polish and Pump Rods; and I 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 pertains to make and use the same.

My invention relates to improved means for connecting and disconnecting the polish and sucker rods in oil-well pumps.

Heretofore it has been necessary, when disconnecting the parts of the oil-pump for any purpose whatever, to disconnect the adjuster from the walking-beam and connect the polish-rod to the sucker-rod line, (a line that passes over the top of the derrick to the bull-wheels,) and the rod raised in the well, so as to free the adjuster from the beam. The standing pipe is then disconnected, the polish-rod separated from the sucker-rod, and the polish-rod, adjuster, and standing pipe lowered to the ground, where they remain until again wanted.

The object of my invention is to provide means by which the polish and sucker rods may be separated without the necessity of disconnecting the adjuster and polish-rod from the walking-beam; and with these ends in view my invention consists in certain details in construction and combinations of parts, as will be more fully explained, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side view, showing the polish-rod disconnected from the sucker-rod by my improved means. Fig. 2 is a longitudinal sectional view of the lower end of the polish-rod and upper end of the sucker-rod, with their intermediate connections. Fig. 3 is a similar view, showing a slightly-modified form; and Fig. 4 shows another form of connection, partly in perspective and partly in vertical section.

A represents the walking-beam, having the adjuster B secured thereto, in which the polish-rod C is adjustably secured. This polish-rod is provided at its lower end with an enlarged head, D, having a female screw-threaded socket, E, opening downward and adapted to receive and retain one end of the connecting-

screw F. The enlarged head D of the polish-rod C is also provided on top with the annular cup-shaped depression G, on which the lower end of the standing pipe H is placed after the same has been disconnected from the tubing of the well. The connecting-screw F is provided at its upper end with a screw-threaded shank, I, on which is screwed the lock-nut J, which latter firmly holds the connecting-screw in proper vertical adjustment relative to the polish and sucker rods. The lower end of this connecting-screw is also provided with an enlarged head, K, similar to the one on the polish-rod, and is provided with a female screw-threaded cavity, L, adapted to receive and retain the upper screw-threaded end, M, of the sucker-rod N.

The connecting-screw F is provided centrally with a square portion, P, on which the wrench is placed when it is desired to connect or disconnect the polish-rod from the sucker-rod, and is also provided on the shank portion with right or left hand screw-threads, while the head thereof is provided with left or right hand female screw-threads, as desired, so that by turning the connecting-screw in one direction it is secured to both the polish and sucker rods, and by turning in the opposite direction is disconnected from both. After the parts have been secured together the lock-nut J is screwed up, which holds the parts securely in place, thereby preventing them from becoming accidentally separated.

When it is desired to disconnect the parts for the purpose of removing the paraffine from the tubing, or for any of the numerous reasons constantly arising which necessitates the removal of parts, the standing pipe H is first disconnected from the tubing and raised until it rests on or in the annular cup-shaped recess on the top of the head of the polish-rod, as shown in Figs. 1 and 2. The lock-nut J is then moved down the rod I, which allows the connecting-screw to be disconnected from the rods. The walking-beam pitman will then be removed from the counter-shaft crank, (not shown in the drawings,) and the polish-rod, standing pipe, and adjuster will remain attached to the beam and be raised with it, so as to be out of the way while drawing the sucker-rod or tubing, as shown in Fig. 1.

By using my improvement a great saving of time is accomplished without increasing the cost of the pump, while at the same time the several disconnected parts are maintained in their relative position out of harm's way, where they remain until again wanted.

In the modification shown in Fig. 3, instead of having the connecting-screw removably secured to both the polish and sucker rods, as shown in Figs. 1 and 2, it is removably swiveled in the head of the sucker-rod and provided with a lock-nut, as in Fig. 2. This construction answers the same purpose, and probably possesses advantages over the device shown in Fig. 2, in that the connecting-screw is so attached to the polish-rod that its removal therefrom is not necessary, and is consequently not liable to be mislaid or lost after removal from the rods.

If desired, the connecting-screw can be swiveled in the same manner to the sucker-rod, instead of the polish-rod, and answer the same purpose. In the modification shown in Fig. 4 a supplemental connecting-piece, Q, is introduced. This piece Q is provided with the screw-threaded shank *a*, which fits in the female screw-threaded cavity in the head of the polish-rod, two curved depending arms, *b*, and a base, *c*, supported by the curved arms. This base *c* is provided with an oblong slot, commencing at one side thereof, between the arms, and extending nearly through the same. This slot *d* is adapted for the reception of the screw-threaded shank *I* of the connecting-screw *F*, which is retained therein by the nut *J'*, which latter is adapted to rest on the top of the base, and is so shaped on top as to conform to the internal curvature of the arms *b*, and the nut *J*, adapted to bear on the under surface of the base. This construction of parts forms a swiveled joint, while at the same time the connecting-screw is removable from the remaining parts, and is also vertically adjustable at the swiveled joint. This construction also enables the polish-rod to be separated from the sucker-rod by simply unscrewing either the nuts *J'* or *J* and withdrawing the connecting-screw from the oblong slot.

My improved joint or connection is simple in construction, durable and efficient in operation, and by its use saves considerable time in connecting and disconnecting the polish and pump rods.

Instead of resting the standing pipe on the top of enlarged head of the polish-rod after the said pipe has been disconnected from the tubing, any suitable device—such as lugs or hooks—can be rigidly or removably secured to the polish-rod above this head and answer the same purpose.

It is evident that numerous changes in the construction of the joint might be resorted to without departing from the spirit of my invention, and hence I would have it understood that I do not limit myself to the exact con-

struction of parts shown and described, but consider myself at liberty to make such changes as come within the spirit and scope of my invention.

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

1. The combination, with a polish-rod provided with means for holding the standing pipe thereon after the same has been disconnected from the tubing, and a sucker-rod, of an intermediate piece adapted to connect the lower end of the polish-rod to the upper end of the sucker-rod and hold them securely in position, substantially as set forth.

2. The combination, with a polish-rod provided with means for holding the stand-pipe thereon after it has been disconnected from the tubing, and a sucker-rod, of an intermediate connecting-piece adapted to be removably secured to the lower end of the polish-rod and the upper end of the sucker-rod, substantially as set forth.

3. The combination, with the polish-rod provided with an enlarged head having a female screw-threaded cavity therein and an annular cup-shaped shoulder on which the standing pipe rests after it has been disconnected from the tubing, and a sucker-rod provided at its upper end with screw-threads, of a connecting screw or piece provided with a screw-threaded shank adapted to fit in the cavity in the head of the polish-rod, and a head having a screw-threaded cavity in which the upper screw-threaded end of the sucker-rod fits, substantially as set forth.

4. The combination, with a polish-rod provided with an enlarged head having a female screw-threaded cavity therein, an annular shoulder on which the standing pipe rests after it has been disconnected from the tubing, and a sucker-rod provided at its upper end with screw-threads, of a connecting screw or piece provided with a screw-threaded shank adapted to fit in the cavity in the head of the polish-rod, and a head having a screw-threaded cavity in which the upper screw-threaded end of the sucker-rod fits, and a lock-nut situated on the shank of the connecting screw or piece and adapted to lock it firmly to the polish-rod, substantially as set forth.

5. The combination, with the polish-rod C, shoulder G, head D, cavity E, and sucker-rod N, provided with a screw-threaded end, M, of the connecting screw or piece F, provided with shank I, head K, cavity L, wrench-square P, and the lock-nut J, all adapted to operate substantially as set forth.

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

EGBERT P. SHETTER.

Witnesses:

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