J. P. SMITH.

Sucker Rod Drawer for Deep Wells.

No. 109,464. Patented Nov. 22, 1870.

Fig. 2.

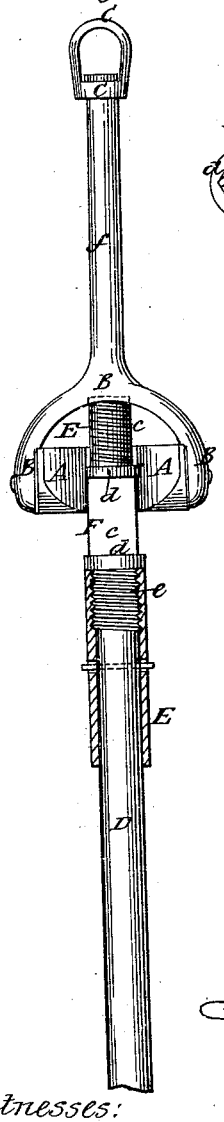


Fig. 5.

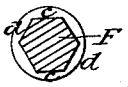


Fig. 6.

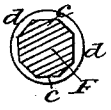


Fig. 3.

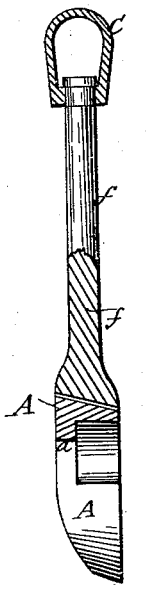


Fig. 1.

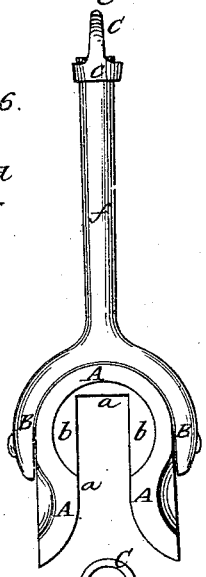
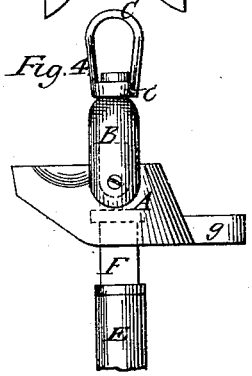


Fig. 4.



Witnesses:

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Henry S. Johnston

Jonas P. Smith, Inventor:

by James Dinsmore

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United States Patent Office.

JONAS P. SMITH, OF PIONEER, PENNSYLVANIA.

Letters Patent No. 109,464, dated November 22, 1870.

IMPROVEMENT IN SUCKER-ROD DRAWERS FOR DEEP WELLS.

The Schedule referred to in these Letters Patent and making part of the same.

To all persons whom it may concern:

I, JONAS P. SMITH, of Pioneer, Venango county, Pennsylvania, have invented a Sucker-Rod Drawer.

For pumping petroleum, salt, or other like deep wells, the "sucker" or lifting-valve must be at the bottom of a long pumping-rod, reaching nearly or quite to the bottom of the well, commonly five hundred to eight hundred feet. This long pumping-rod is made up of a series of rods, each fifteen to twenty feet long, called "sucker-rods," screwed together endwise.

Sucker-rods commonly are of wood, "ironed off," as follows:

A thimble-socket (a short iron tube, with the orifice a plain hole at one end, and a tubular screw at the other,) is fastened to each end of each rod, the plain hole over the wood, by rivets laterally through the iron and wood; a screw-pin, a short iron bar round at the ends, and a screw on each end adapted to the tubular screws on the socket-thimbles, with a short square or angular body between the screws, for convenience of holding and griping, is then screwed into a thimble of each rod, thus, when finished, leaving each rod with a screw-thimble or mortise at one end and a screw-tenon at the other; and, practically, the rods are joined by screwing the the foot of one onto the head of another.

Putting in sucker-rods to a well has been done heretofore commonly, as follows:

To a chain or rope from a windlass attach a short iron bar, having a socket at the other end, in which is a tubular screw, to fit over the screw-pin of a sucker-rod; screw the socket of this bar onto the head of a sucker-rod, and let it into the well till the square or angular part of the screw-pin is down to the top of the well; unscrew the iron bar, screw it onto another rod, screw the other end of the other rod onto the upper end of the one in the well, and let both into the well till the screw-pin of the last is down to the top of the well, and so on; and "drawing sucker-rods" is the same process, partly reversed.

This invention is a modification and improvement of my improved tube-drawer, which is the subject of a separate application for a patent, and its object is to hold a sucker-rod, suspended by a gripe around the angular part of the screw-pin, instead of by a thimble screwed onto the end; and

The nature of the invention is to adapt the socket of my improved tube-drawer to fit onto and gripe the angular body of the screw-pin of a sucker-rod.

The following description and accompanying drawing, having like letters of reference, fully illustrate the invention.

A is a socket or main body of a clamp to go over and hold a sucker-rod.

B is a bail, pivoted to the socket A and adapted to swing over and hold down the screw-pin of a sucker-rod, when in place within the socket.

C is a swivel attached to the top of the bail B.

D is a part, showing one end of a sucker-rod.

E is a socket-thimble, adapted to go over the end of a sucker-rod, D, and with a tubular screw in the end of the thimble part.

F is a screw-pin, with a screw on each end, adapted to fit into the end of a socket-thimble, E.

a is a slot or mortise vertically through the socket A, and laterally open through at one side, and through nearly to the side opposite, large enough to go over easily and gripe closely the angular part of the screw-pin F.

b is a recess or rabbet over and around the slot *a* in the socket A, from the top vertically, part way through, adapted to fit and receive and make a seat for the shoulder of a screw-pin, F.

c is the angular main body of the screw-pin, F, large enough in diameter between any two of its flat sides to fill and easily go in the slot *a* of the socket A.

d is a shoulder on the screw-pin F, between the angular body *c* and the screw at each end, projecting radially out beyond the screw and any flat side.

e is a screw on each end of each screw-pin F, and on the inside of the thimble end of each socket-thimble E.

f is a projection on the back side of the socket A, opposite to the opening of the slot *a*, for convenience of holding a socket over a well, and for the bail B to rest on when swung down.

g is a long shank or handle to the bail B, if desired.

To work the invention, put the slot *a* of the socket A over and onto the angular body *c* of the screw-pin head F of a sucker-rod, D; lift up the socket till a shoulder, *d*, of the sucker-rod, strikes and rests on the seat or rabbet *b*; swing the bail B over the head of the sucker-rod; attach a rope or chain from a windlass to the swivel C, and let down or draw up, as desired.

The merit of the invention is the means of holding and handling sucker-rods, when suspended, by griping around them, instead of screwing a socket into their heads. It is a much safer and handier way, and saves much time; and the essential feature of the invention is in adapting the socket-aperture of my improved tube-drawer to fit a shoulder and two flat sides of a sucker-rod head, as hereinbefore described.

I claim—

A sucker-rod drawer, in which a slot and recess of a holding-socket are adapted to receive and hold a combined sucker-rod, substantially as described.

JONAS P. SMITH.

Witnesses:

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