

(No Model.)

L. SPRINGER.
POLISH ROD CLAMP FOR OIL WELLS.

No. 540,882.

Patented June 11, 1895.

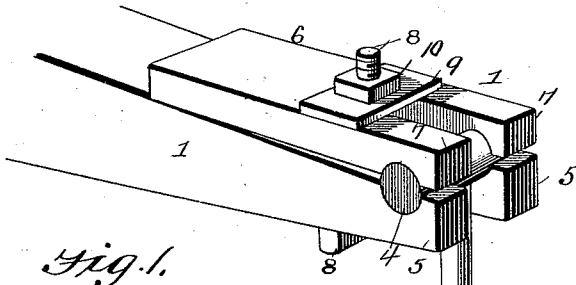


Fig. 1.

Fig. 5.

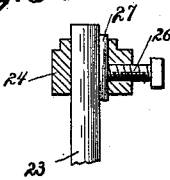


Fig. 2.

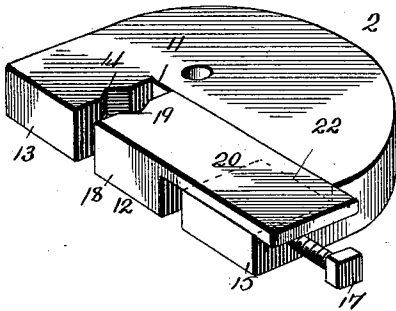


Fig. 3.

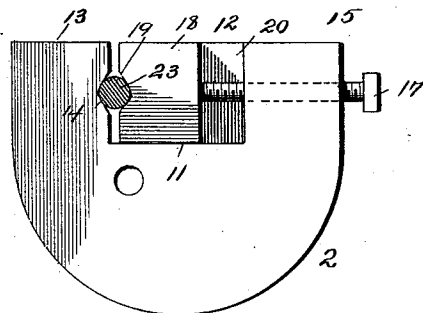
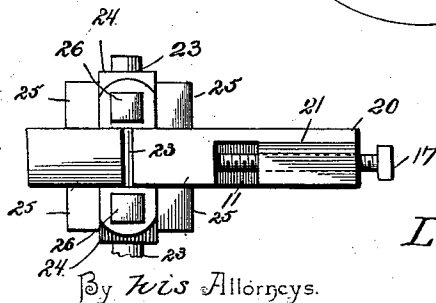


Fig. 4.



Witnesses

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LEVI SPRINGER, OF MONTEZUMA, OHIO.

POLISH-ROD CLAMP FOR OIL-WELLS.

SPECIFICATION forming part of Letters Patent No. 540,882, dated June 11, 1895.

Application filed February 27, 1895. Serial No. 539,900. (No model.)

To all whom it may concern:

Be it known that I, LEVI SPRINGER, a citizen of the United States, residing at Montezuma, in the county of Mercer and State of Ohio, have invented a new and useful Polish-Rod Clamp for Oil-Wells, of which the following is a specification.

This invention relates to an improvement in clamps for connecting a polish rod to a walking beam in such manner as to permit said rod to be disconnected from the walking beam and adjusted in height relatively thereto.

The object of this invention is to provide a clamp which may be located within convenient reach of a workman standing on the derrick floor, which shall be capable of being quickly and easily manipulated and adjusted, which shall be simple and inexpensive in construction, durable and not liable to get out of order, and which shall be thoroughly effective for the purpose for which it is intended.

This invention while useful in operating deep wells in general, is particularly valuable when used in connection with oil wells, since, to secure the greatest yield from a well of this description, it is necessary to make provision whereby the length of the polish rod and the position of the piston may be regulated, so that said piston may be adjusted to the required depth in the well.

To this end the invention consists in certain features and details of construction and arrangement of parts, as hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view showing a portion of a walking-beam, the manner of supporting my improved clamp thereon, and the working parts of said clamp. Fig. 2 is a perspective view of the clamp with the sliding jaw opened to permit the insertion or withdrawal of the polish-rod. Fig. 3 is a bottom plan view of the clamp with the polish-rod in section. Fig. 4 is an end elevation of the same with the polish-rod broken away. Fig. 5 is a cross-section through one of the clamping-blocks.

Similar numerals of reference indicate corresponding parts in the figures of the drawings.

Referring to the drawings, 1 indicates one

end of a walking beam, and 2, the main jaw or body of my improved clamp. Said clamp is suspended beneath the end of the walking beam 1 at any convenient or desired distance therefrom by means of a rod or post 3, to the lower end of which the clamp 2 is fixedly attached, the upper end of said supporting rod or post being provided with a cross head or laterally projecting trunnions 4, as shown. The end of the walking beam 1 is bifurcated or forked to form two arms 5 between which the supporting rod or post 3 passes. The upper faces of the arms 5 are provided with corresponding concavities which are adapted to receive the cross head or trunnions 4, referred to. A securing plate 6, provided similarly to the walking beam 1 with a bifurcated end or fork and parallel arms 7—7, rests above the cross head or trunnions 4 and is also provided with concavities in the under faces of its arms 7—7 for embracing the cross head or trunnions 4 at the upper end of the supporting rod or post 3.

8 indicates a T-headed bolt passing upwardly through the walking beam 1, and securing plate 6, and located in the forks thereof or between the arms 5—5 and 7—7. The head of the bolt 8 engages the under side of the walking beam, and at its upper end the shank of said bolt passes through a plate or washer 9 striding the fork in the securing plate 6, and provided above the same in a suitable nut 10, whereby the parts are clamped and held in place.

The main clamp or body of my clamping device is made substantially in horse-shoe form, and is provided at 11 with a recess or opening for the reception of the vertical portion of a sliding piece or clamp 12. The lug or projection 13 on one side of the opening 11 forms the fixed clamping jaw of the device, and is provided on its inner face at 14 with a vertically extending concavity, as shown. The lug 15 on the other side of the opening 11 is provided with a horizontal screw threaded perforation, for the reception of a set-screw 17.

The movable sliding jaw 12 is formed with a downwardly extending clamping portion 18 provided on its face adjacent to the lug 13 with a vertically extending concavity 19 in

line with and corresponding to the similar concavity 14 in the lug 13.

20 indicates a horizontal arm or extension projecting laterally from the upper portion of the sliding clamp 12.

The upper portion of the lug 15 is cut away, as indicated at 21, for the reception of the horizontal extension 20 of the sliding jaw, a shoulder 22 being thus formed against which the inner face of the sliding clamp 18 and its horizontal extension slide for guiding and steadying the movements of the movable jaw.

23 indicates the polish rod.

In operation, the polish rod is held between the fixed jaw 13 and the sliding jaw 12 by means of the set-screw 17. It will be apparent, that by turning the set-screw 17 outwardly, the sliding jaw may be withdrawn from its engagement with the polish rod, which may thus be removed and disconnected from the clamp and the walking beam, and which may be adjusted in height and again clamped in position by turning in the set-screw 17. Thus I obtain a clamp which is simple in construction, strong and durable, which may be easily and quickly manipulated and which is thoroughly effective in practice.

Should it be desired to turn the polish rod, clamping blocks 24, located one above and another below the main clamp 2, are employed, each provided with side wings or extensions 25, a set screw 26, and a binding plate or piece of brass 27, which bears directly against the polish rod 23 and prevents injury to the surface thereof as it is very important to keep said rod smooth. By tightening the clamping blocks 24, and loosening the main clamping screw 17 the polish rod 23 may be

turned while still in operation and without stopping the pump.

What I claim is—

1. In a polish rod clamp for wells, a main or stationary jaw supported beneath and mounted in the end of the walking beam, and an adjustable jaw having a sliding connection with the main or stationary jaw, in combination with a pair of clamping blocks located one above and the other below the main clamping jaw, and the set screws for engaging said clamping blocks with the polish rod, for the purpose substantially as described.

2. In a polish rod clamp for wells, a supporting rod mounted in and depending from the walking beam, and a stationary jaw secured to the lower end of said rod and upheld thereby, and provided with a recess opening out at or upon one side thereof so as to permit the polish rod to be introduced and removed laterally, in combination with an adjustable and sliding clamp having an arm 22 resting in a recess 21 in that portion of the stationary jaw opposite to the working face thereof, said clamp being further provided with a vertical extension formed integrally therewith and resting within the opening or recess in the stationary jaw, and a set screw passing through the stationary jaw and bearing against the integral vertical portion or extension of the adjustable sliding clamp, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LEVI SPRINGER.

Witnesses:

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C. G. O. MILLER.