June 19, 1928.

1,673,960

G. E. WATSON

SPUDDING SHOE

Filed June 29, 1927

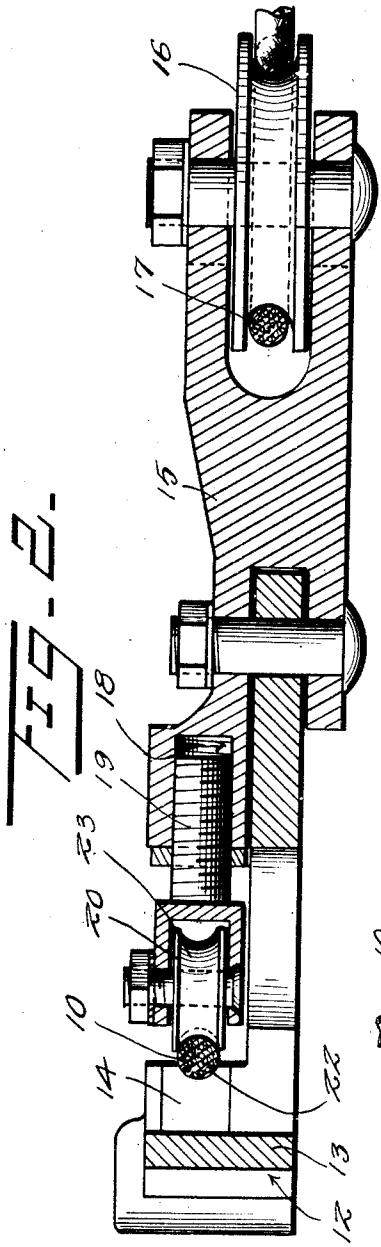


Fig. 2.

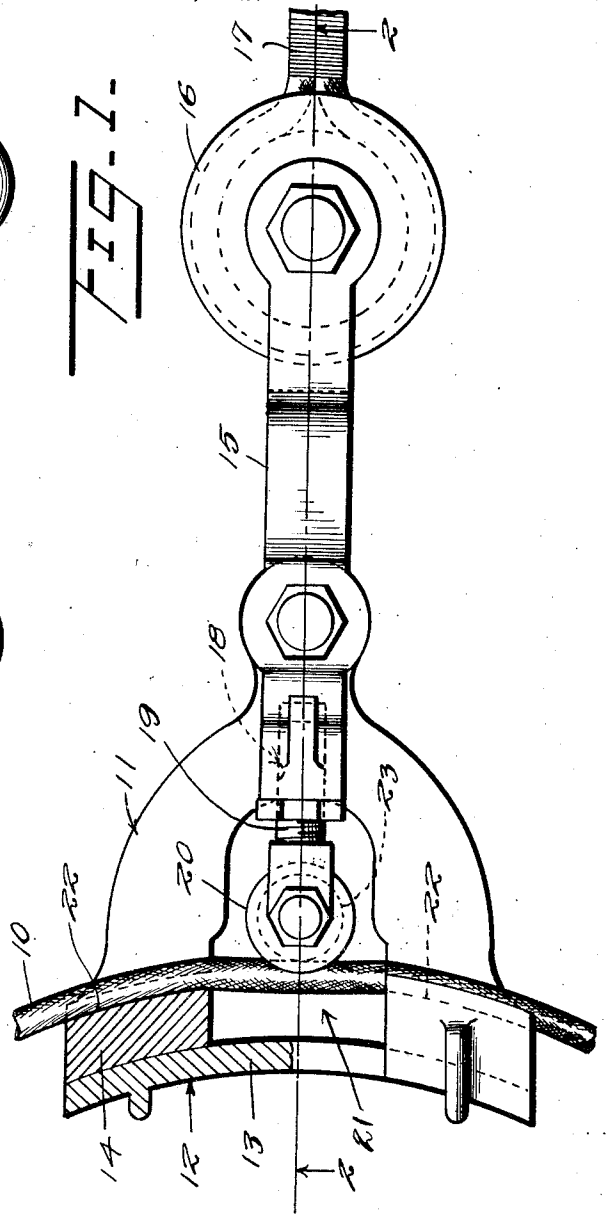


Fig. 1.

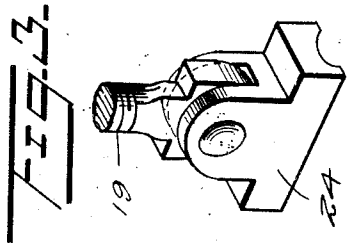


Fig. 3.

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SPUDDING SHOE.

Application filed June 29, 1927. Serial No. 202,372.

This invention relates to new and useful improvements in well drilling devices, and particularly to devices used in "spudding."

The ordinary spudding shoe, now in use, is subject to change in its position with respect to the drilling line, by reason of its slipping upwardly or downwardly on the line, and thereby altering the stroke of the line, and consequently that of the drill.

The principal object of the present invention is to provide a spudding shoe which will maintain its position on the drilling line, throughout the entire stroke, that is backwardly and forwardly, with the line, thereby insuring an even and constant operation of the drill line and drill.

Another object is to provide a spudding shoe which is equipped with an adjustable means for frictionally engaging the drilling line, whereby to maintain the position of the shoe on the line.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawing.

In the drawing:

Figure 1 is a side elevation of a spudding shoe, made in accordance with the present invention, and shown in connection with the drilling line.

Figure 2 is an enlarged longitudinal sectional view on the line 2—2 of Figure 1.

Figure 3 is a detail view showing another form of shoe for the line engaging end of the lever.

Referring particularly to the accompanying drawing, 10 represents the drilling line, in connection with which the present invention is adapted for use.

The spudding shoe includes a substantially triangular member 11, having the base thereof longitudinally curved, as at 12, and formed with an angularly extending flange 13. Disposed on this flange are the liners 14, over which the drilling line 10 is engaged, and by means of which said line is pulled laterally. Pivotally mounted on the smaller or apex end of the member 11 is the intermediate portion of the arm or lever 15. The outer end of the arm is provided with a grooved wheel 16 with which is engaged the jerk line 17. The other end of the lever 15 is formed with a threaded bore 18 in which is engaged the screw stem 19, said stem carrying on its outer end the bearing shoe 20 which bears against the line 10, intermediate the liners 14. It will be noted that the wider end portion of the member 11 is formed with an opening 21, and that a liner 14 is located on the flange 13, at each side of said opening, thus providing a space between the inner ends of the liners into which the bearing shoe 20 is adapted to press or flex the adjacent portion of the line 10. As the face of the shoe 20 wears the operator can turn the stem 19, thereof, and move the shoe outwardly whereby to be restored to position for properly engaging the drilling line 10.

The line engaging faces of the liners 14 are provided with grooves 22, for properly receiving the line, while the shoe 20 is grooved, at 23, to receive the line, whereby to prevent displacement of the line therefrom.

The drilling line 10 may be easily and quickly engaged with the liners, or disengaged therefrom, by simply swinging the lever 15 in either direction, to remove the shoe 20 from engagement with the line.

In Figure 3 there is shown a modification of the line engaging end of the lever 15, wherein a grooved shoe 24 is pivotally mounted on the said end of the lever, for engagement with the portion of the drilling line which lies between the liners 14.

What is claimed is:

1. A spudding shoe including a body connected with a jerk-line, a divided drilling-line seat on the body, and means on the body for pressing the drilling-line within said division whereby to maintain the said line on the seat.

2. A spudding shoe including a body connected with a jerk-line and having a seat, spaced drilling-line engaging liners on the seat, and an auxiliary shoe on the body engaged with the drilling-line between the liners for kinking said line thereat whereby to maintain the line engaged with the liners.

3. A spudding shoe including a body connected with a jerk line having a ledge, spaced liners engaged on the ledge, and arranged to receive a drilling line thereon, and an auxiliary shoe engaged with the drilling line between the liners for pressing said drilling line against the liners.

4. A spudding shoe including a body having a drilling line seat provided with liners spaced from each other, an arm movably carried by the body for attachment of a jerk line, and a shoe on the arm engaged

with the line between the liners for maintaining the line engaged with the liners.

5. A spudding shoe including a body having a drilling line seat and spaced liners on the seat for engagement by a drilling line, an arm pivotally mounted on the body and having an end for attachment of a jerk line, the other end of the arm having a socket, and an adjustable shoe in the socket for engagement with the drilling line.

6. A spudding shoe including a body having a centrally divided drilling line seat, an arm pivotally mounted on the body and having an end formed for attachment with a jerk line, and an adjustable shoe on the other end of the arm for engagement with the drilling line in the division of the seat, whereby to maintain said line properly engaged with the seat.

7. A spudding shoe including a body having a pair of spaced drilling line seats, an arm pivotally mounted on the body and having an end formed for attachment of a jerk line, the other end of the arm being provided with a threaded socket, a stem engaged in the socket, and a shoe on the outer end of the stem for engagement with the drilling line between the seats, whereby to maintain the line engaged with the seats.

In testimony whereof, I affix my signature.

GEORGE E. WATSON.