April 19, 1927. 1,625,774

F. W. SADLER

CASING COVER AND TOOL HOLDER

Filed May 19, 1926

Fig. 1.

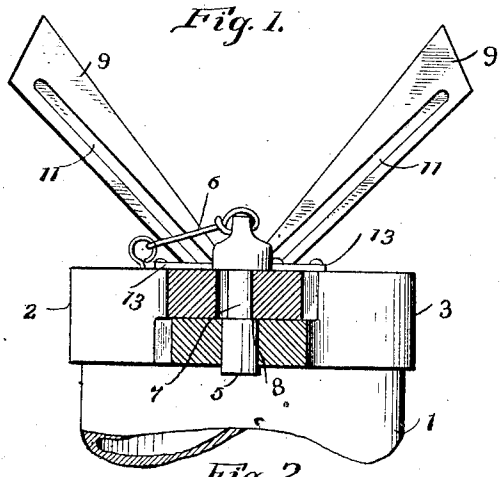


Fig. 2.

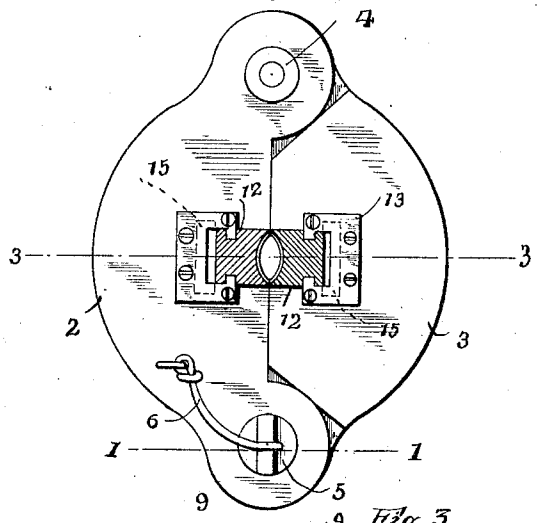


Fig. 4.

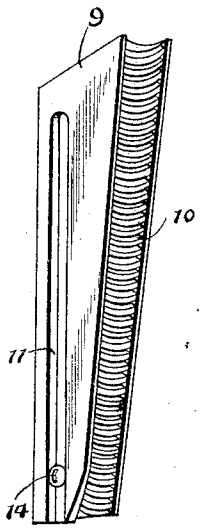
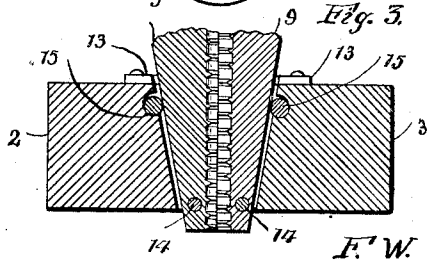


Fig. 3.



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UNITED STATES PATENT OFFICE.

FREDERICK W. SADLER, OF OKLAHOMA CITY, OKLAHOMA, ASSIGNOR OF ONE-FOURTH TO BARBARA E. TURNEY, OF OKLAHOMA CITY, OKLAHOMA.

CASING COVER AND TOOL HOLDER.

Application filed May 19, 1926. Serial No. 110,262.

This invention relates to the type of tools for deep wells designed to be placed upon the casing and cover the same to prevent anything from being thrown into the well and which is adapted to hold a cable, rod or other part to prevent its dropping into the well.

In accordance with the present invention, the cover is made in similar halves or sections, which are pivoted at one end and made secure at the opposite end by a pin which is self-locking to prevent casual displacement.

The invention further contemplates a positive connection between the slips and sections of the cover to prevent misplacement of the slips and insure having them at hand for instant use when required.

While the drawings illustrate a preferred embodiment of the invention it is to be understood that in adapting the means to meet specific needs and requirements, the design may be varied and such other changes in the minor details of construction may be resorted to within the scope of the invention as claimed, without departing from the spirit thereof.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and the drawings hereto attached, in which—

Figure 1 is an elevational view of a casing cover and tool holder for deep wells, embodying the invention, the cover being in section on the line 1—1 of Figure 2,

Figure 2 is a top plan view of the cover, the slips being in section,

Figure 3 is a detail sectional view on the line 3—3 of Figure 2, a portion of the slips being broken away, and

Figure 4 is a detail perspective view of one of the slips, showing the same on a larger scale.

Corresponding and like parts are referred to in the following description and designated in the several views of the drawings by like reference characters.

The numeral 1 designates the upper end of the casing of an oil well, which is adapted to receive the well tubing, not shown, and through which the usual tools are introduced when boring, bailing, or otherwise preparing the well for action.

In accordance with the present invention, the casing cover comprises similar parts or sections 2 and 3, which are pivotally connected at one end, as indicated at 4, and which are adapted to be connected at the opposite end by means of a pin 5. The sections or parts 2 and 3 are constructed to have opposite end portions overlap and these overlapping parts are apertured to receive the pivot fastening 4 and the locking pin 5. To prevent loss of the locking pin, it is connected to one of the sections or parts by means of an element 6 which may consist of a wire, chain or similar connection. The body of the locking pin 5 is reduced adjacent the head, as indicated at 7, to provide a shoulder which prevents withdrawal of the locking pin when the parts are properly assembled and in active operation. The reduced portion 7 of the locking pin is preferably eccentric so as to provide a pronounced shoulder to engage under the overlapping portion of the section 2, as indicated most clearly in Figure 1. When the sections or parts 2 and 3 are adjusted so that their meeting edges are in contact, the openings in the overlapping portions, to receive the locking pin 5, coincide so that the pin 5 may be placed in position, or removed as desired. After the pin 5 has been placed in position, the parts 2 and 3 are moved apart a slight distance to cause the overlapping portion of the section 2 to engage over the shoulder 8 formed at the end of the reduced portion 7 remote from the head of the pin 5, thereby preventing accidental displacement of the pin.

The slips 9 may be of any approved construction, and are disposed upon opposite sides of the usual opening through which the cable, rod, or other part is passed. The gripping faces 10 of the slips 9 may be corrugated, or otherwise formed to prevent possible slipping of the part gripped between the slips. In accordance with the present invention, a longitudinal groove or channel 11 is formed in each side of each of the slips adjacent and parallel with the back thereof. The grooves or channels 11 receive lugs 12 of retainers 13 which are secured to the sections of the cover. A pin 14 or like part is fitted in a transverse opening formed in each of the slips 9 in line with the grooves 11 and its ends project into the grooves to close the lower ends thereof and prevent casual disengagement of the slips from the cover when properly fitted thereto. Rollers 15 are fitted into recesses formed in the respective parts

2 and 3 and minimize the friction incident to movement of the slips 9. The retainers 13 and the rollers 15 are located near the top of the cover and in consequence, the slips 9 may be adjusted to the position substantially as indicated in Figure 1, thereby admitting of a part being readily placed in position and the slips closing upon such part to grip and hold the same.

The cover completely closes the casing and prevents anything from being thrown into the well and the slips firmly grip a cable, rod or other part to hold it in the required position and prevent the tool carried thereby from dropping into the well.

Having thus described the invention, I claim:

1. A tool for deep wells comprising a casing cover including similar sections pivotally connected at one end and having overlapping portions at the opposite end, and a locking pin having a head at one end and adapted to pass through registering openings formed in the overlapping end portions and having a part adjacent the head reduced to provide a shoulder for the overlapping end portion of a section to engage over to prevent casual withdrawal of the pin.

2. A deep well tool comprising a casing cover having the usual opening, slips within the opening and provided in their opposite sides adjacent and parallel to their backs with grooves, retaining means at the top of the cover including lugs entering the side grooves of the slips, and stop means closing the lower ends of the grooves in the sides of the slips and adapted to coact with the said lugs to prevent displacement of the slips.

3. A deep well tool comprising a sectional casing cover recessed to receive rollers, connecting means for securing the sections together when adjusted to operative position, slips having longitudinal grooves formed in opposite sides, rollers mounted in said recesses of the cover sections and retainers on the parts of the cover engaging the longitudinal grooves of the slips to prevent displacement thereof.

In testimony whereof I affix my signature.

FREDERICK W. SADLER. [L. S.]