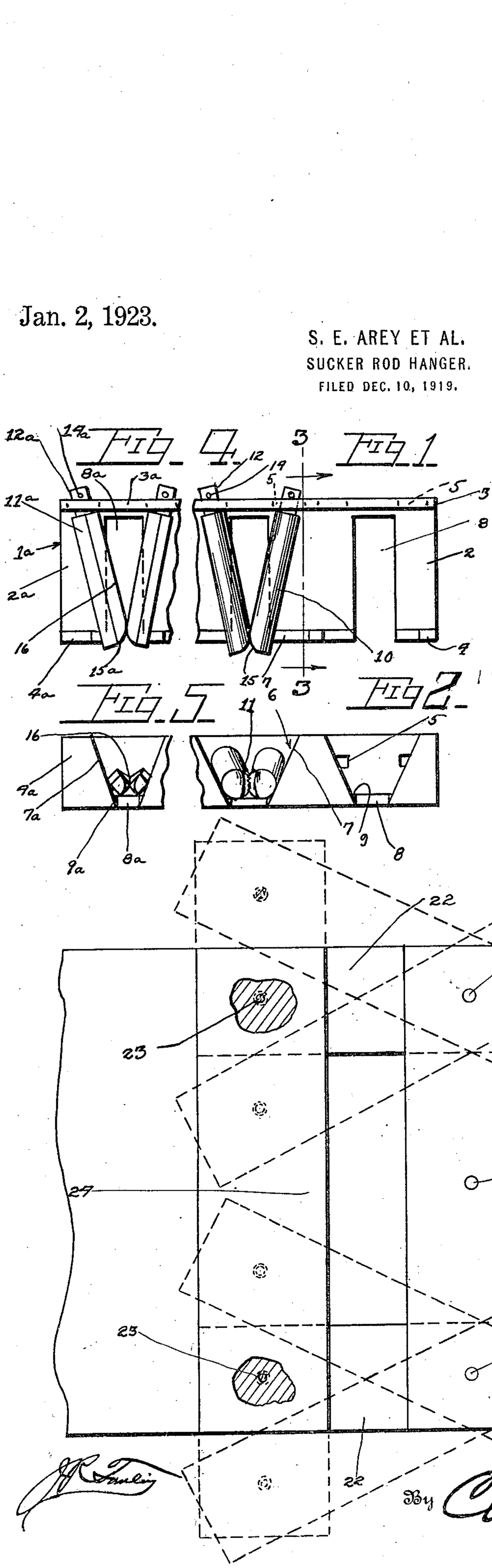
Jan. 2, 1923. 1,440,712.

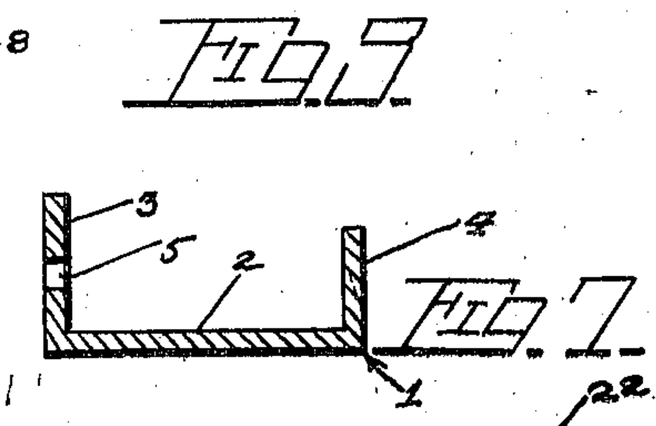
S. E. AREY ET AL.

SUCKER ROD HANGER.

FILED DEC. 10, 1919.

2 SHEETS—SHEET 1.





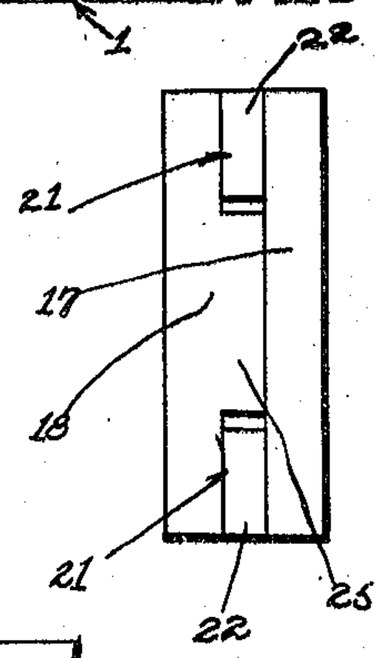


FIG. 6

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FILED DEC. 10, 1919. 2 SHEETS—SHEET 2.

Fig. 8.

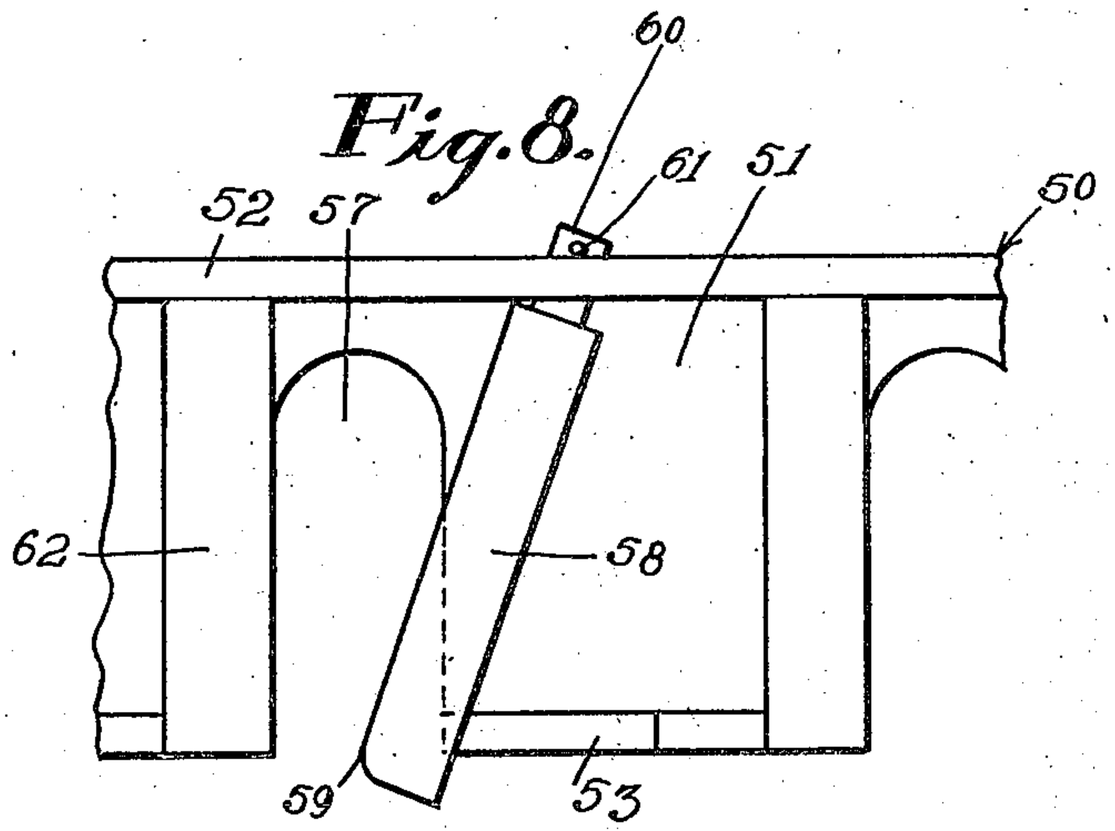
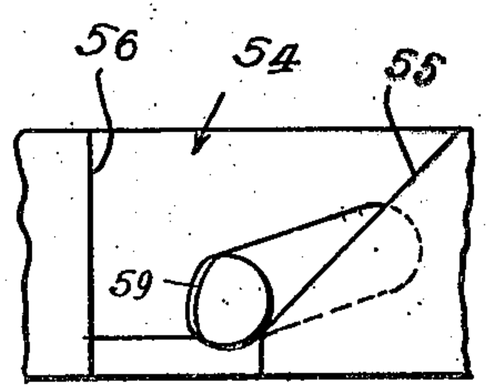


Fig. 9.



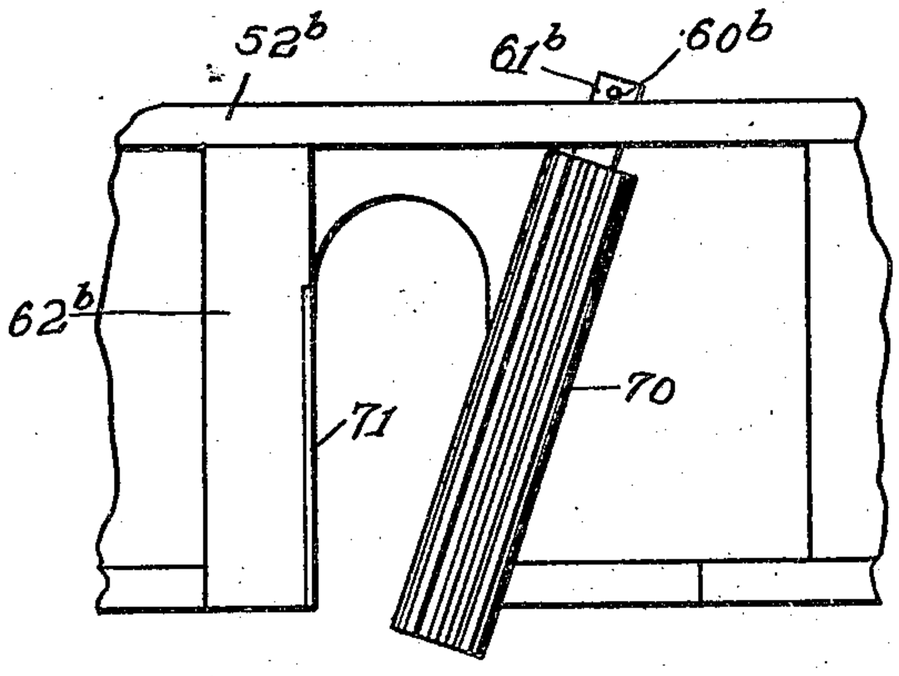


Fig. 10.

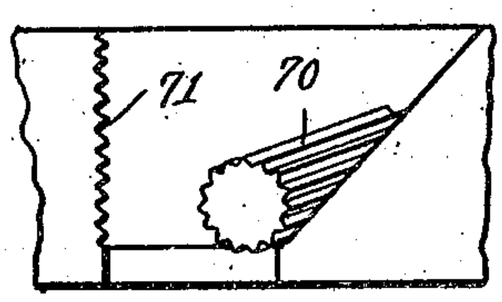


Fig. 11.

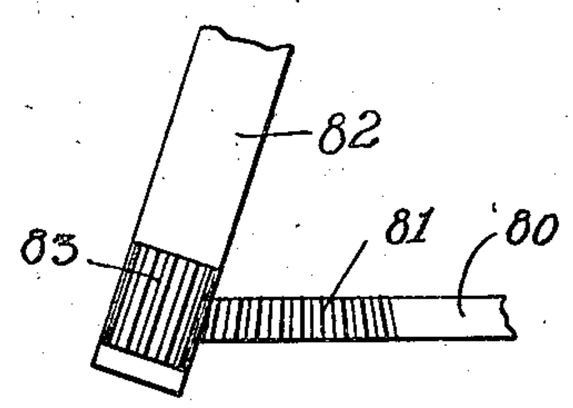


Fig. 12.

Witness

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Patented Jan. 2, 1923. 1,440,712

UNITED STATES PATENT OFFICE.

SAMUEL E. AREY AND JAY J. HERN, OF FELLOWS, CALIFORNIA.

SUCKER-ROD HANGER.

Application filed December 10, 1919. Serial No. 343,901.

To all whom it may concern:

Be it known that we, SAMUEL E. AREY and JAY J. HERN, citizens of the United States, residing at Fellows, in the county of Kern, State of California, have invented a new and useful Sucker-Rod Hanger, of which the following is a specification.

The device forming the subject matter of this application is adapted to be employed for suspending sucker rods of the sort commonly used in connection with well drilling, and the invention aims to provide novel means whereby the sucker rods may be inserted readily into a supporting frame and, with equal facility, be removed therefrom, the construction being such that the rods are suspended by a cam or cams at any point desired, the rods being so suspended in the hanging device that the collar on the rod will remain at any point desired above the frame, the end in view being to enable a sucker rod elevator to be applied to the rod under the collar.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown may be made without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in top plan, a device constructed in accordance with the invention; Figure 2 is a front elevation of the structure shown in Figure 1; Figure 3 is a cross section taken on the line 3—3 of Figure 1; Figure 4 is a top plan showing a modification; Figure 5 is a front elevation showing a modification; Figure 6 is a front elevation showing a still further modification; Figure 7 is an elevation wherein the structure shown in Figure 6 is viewed endwise; Figure 8 is a top plan showing a modified form of the invention; Figure 9 is a front elevation of the structure shown in Figure 8; Figure 10 is a view similar to Figure 8 but showing a further modification; Figure 11 is an elevation of the structure shown in Figure 10; and Figure 12 is a fragmental top plan showing a slight modification.

Referring to Figures 1, 2 and 3, there is provided a trough-shaped support 1 including a base 2, a rear wall 3 and a front wall 4. The rear wall or flange 3 is supplied with rectangular openings 5. In the front wall or flange 4 there are notches 6 defined by downwardly converging edges 7. Slots or openings 8 are formed in the base 2 and open at one end through one edge of the base. Portions 9 of the base 2, on each side of the slot 8, at said open end thereof, project beyond the converging edges 7 of the notch 6. Retainers 10 are provided, the same being, if desired, of circular cross section, and having their inner edges milled or otherwise roughened as shown at 11. At their rear ends, the retainers 10 are supplied with shanks 12 which are of rectangular cross section, the shanks 12 being mounted in the openings 5 of the rear flange 3 of the support 1. Securing elements 14, such as pins pass through the shanks 12 to the rear of the flange 3 and to hold the retainers in the said flange. The forward ends of the retainers 10 are mounted to slide downwardly on the converging edges 7 of the notches 6. The forward extremities of the retainers 10 preferably are beveled, as indicated at 15.

In practical operation, the forward ends of the retainers 10 are supported on the portions 9 of the base 2 of the support 1. A sucker rod or like object is inserted between the retainers 10, the beveled portions 15 of the retainers facilitating such an operation. The retainers 10 ride upwardly on the edges 7 of the notches 6 during the insertion of the sucker rod between the retainers, and, after the sucker rod has been mounted in place between the retainers, the retainers tend to slide downwardly along the edges of the notches 6 and grip the rod, the rod thus being supported in the slot 8.

In Figures 4 and 5, parts hereinbefore described have been designated by numerals previously used with the suffix "a." This form of the invention is characterized by the fact that the retainers 10^a are of rectangular cross section and present sharpened edges 16 to the sucker rod or other object which is to be suspended.

In Figures 6 and 7, the numeral 17 designates a portion of a frame work or support. A fixed jaw, preferably in the form

of a block 18, is attached to the support 17 by securing elements 19 and 20, the block or jaw 18 having openings 21 in its ends, defining a central projection 25 which bears against the support 17. The securing element 20 passes through the central projection 25, whereas, the securing elements 19 extend across the openings 21 which exist at the ends of the block or jaw 18. On the securing elements, links 22 are pivoted, the links 22 being united by pivot elements 23 with a movable jaw 24, constructed like the block or jaw 18.

It will be obvious that, when a sucker rod is inserted between the jaws 24 and 18, the jaw 24 along with the links 22 will tend to swing downwardly, on the securing elements 19, the sucker rod thus being gripped between the jaws 24 and 18.

It will be obvious that, since the rectangular parts 12 of the retainers 10 are received against rotation in the openings 5, the retainers cannot rotate on their axes. Consequently, the retainers will preserve their hold on the sucker rod.

Referring to Figure 8 there is shown a trough-shaped support 50 including a base 51, a rear wall 52 and a front wall 53 having a notch 54 defined by an inclined edge 55 and an edge 56 disposed at right angles to the base 51. An opening 57 is formed in the base 51 and communicates with the notch 54. The retainer is indicated at 58 and is beveled at 59 at its outer end, the retainer including a shank 60 mounted in the rear wall 52 as hereinbefore described and held in place by a pin 61. In this form of the invention, one of the movable retainers shown in Figures 1 and 4 is replaced by a fixed retainer 62 extended between the walls 53 and 52.

In Figures 10 and 11, parts shown in Figures 8 and 9 are designated by numerals used in those Figures, with the suffix "b." In this form of the invention, the retainer may be provided with corrugations or teeth 70, these corrugations or teeth being applied to the movable retainer. The fixed retainer 62^b may be provided with teeth 71.

It has been pointed out hereinbefore that the shanks of the retainers are held against rotation in the rear wall of the trough-shaped support. In case it should be desired to have the shanks of the retainers rotate in the said rear wall, then the construction shown in Figure 12 may be resorted to. In Figure 12, the retainer 82 has cog teeth 83 meshing into the rack 81 formed in the corresponding inclined edge of the notch in the front wall 80.

Having thus described the invention, what is claimed is:—

1. In a device of the class described, a trough-shaped support including a base, a rear wall, and a front wall, the base having an opening, and the front wall having a notch defined by edges which converge downwardly toward the notch; and retainers having their rear ends pivoted to the rear wall, the forward ends of the retainers being slidably mounted on the converging edges of the notch.

2. A device of the class described, constructed as set forth in claim 1 and further characterized by the fact that the retainers are held in the rear wall against rotation.

3. In a device of the class described, a trough-shaped support including a base, a rear wall, and a front wall, the base having a slot which opens at one end through one edge of the base, and the front wall having a notch defined by edges which converge downwardly toward the slot portions of the base, on each side of the slot, at said open end thereof, projecting beyond the converging edges of the notch; and retainers having their rear ends pivoted to the rear wall, the forward ends of the retainers slidably mounted on the converging edges of the notch, and being supported on said portions of the base.

4. In a device of the class described, a trough-shaped support including a base, a rear wall and a front wall, the base having an opening, the front wall having a notch, one edge of which slants downwardly and inwardly, and retainers extended between the front and rear walls, one retainer being movable and having its forward end slidably mounted on the said edge of the notch, the rear end of the retainer being mounted movably in the rear wall.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

SAMUEL E. AREY.
JAY J. HERN.

Witnesses:
W. B. BLODGET,
J. N. WILLIAMS.