

No. 754,579.

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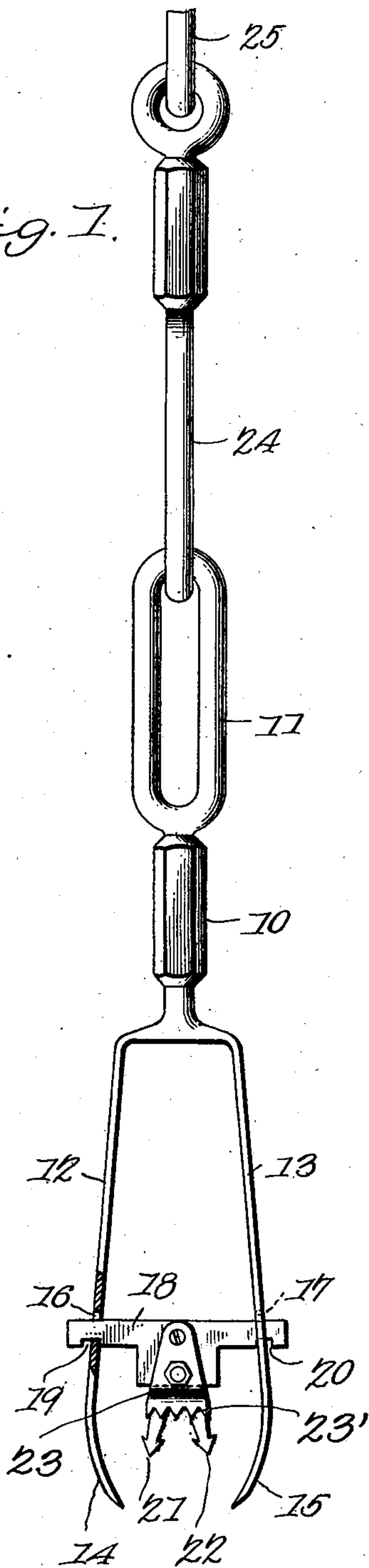
J. LUKE.

DRILL OR PUMP ROD GRAPPLE.

APPLICATION FILED SEPT. 17, 1903.

NO MODEL.

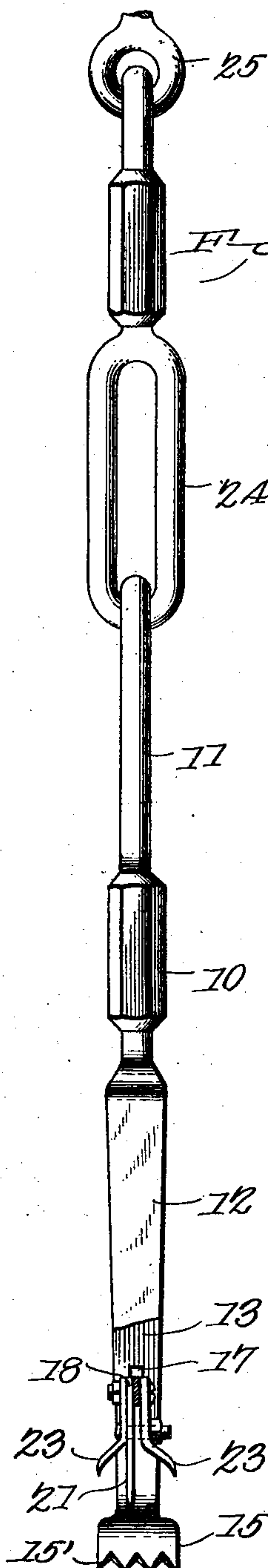
Fig. 1.



Witnesses

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Fig. 2.



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JAMES LUKE, OF ESKRIDGE, KANSAS.

DRILL OR PUMP ROD GRAPPLE.

SPECIFICATION forming part of Letters Patent No. 754,579, dated March 15, 1904.

Application filed September 17, 1903. Serial No. 173,615. (No model.)

To all whom it may concern:

Be it known that I, JAMES LUKE, a citizen of the United States, residing at Eskridge, in the county of Wabaunsee and State of Kansas, have invented a new and useful Drill or Pump Rod Grapple, of which the following is a specification.

This invention relates to devices employed for recovering broken drill or pump rods from wells and for similar purposes, and has for its object to improve and simplify the construction of devices of this character; and the invention consists in certain novel features of construction, as hereinafter shown and described, and specified in the claims.

In the drawings illustrative of the invention, in which corresponding parts are denoted by like designating characters, Figure 1 is a front elevation, and Fig. 2 is a side elevation, of the device, partially in section.

The improved device comprises a stock or body portion 10, having an elongated loop 11 at the upper end and with the lower end formed with spaced resilient arms 12 13, the latter terminating in inwardly-extending and laterally-projecting claws 14 15, the edges of the claws being preferably serrated or toothed, as shown at 15'. Intermediately of the arms 12 13 are elongated apertures 16 17, through which a bar operates, the apertures permitting a slight vertical movement of the bar. The bar 18 is provided with spaced notches 19 20 near its walls for engagement with the walls at the lower ends of the apertures, and thus serves as a trip-bar to hold the arms 12 13 in their distended position, as in Fig. 1. It will thus be obvious that any upward movement of the bar 18 will release the arms 12 13 and permit the claws to grapple any object placed between them.

Extending from the bar 18 are spaced bars 21 22, terminating in double-sided barbs intermediately of the bar 18 and claws 14 15, and attached to one or both sides of the bar 18 is a catch plate or plates 23, extending laterally into longitudinal alinement with the laterally-projecting portion of the claws 14 15, as shown, and preferably provided with serrations, forming teeth 23'. By this arrangement in event of the breakage of a drill-rod, pump-rod, or

the like in a well or similar locality the implement is "set," as in Fig. 1, and lowered into the well until the barbed bars 21 22 or the catch-plate 23 strikes the broken end of the rod, when the impact will displace the bar 18 and release the arms 12 13 and cause their spring force to engage the broken rod with the claws 14 15, strongly grappling the rod, which may then be elevated.

Generally the broken end of the rod rests against one side of the well in rather a difficult position to be reached by an ordinary "grappling" implement; but by providing the laterally-extending catch-plate 23 the broken rod end is certain to be engaged by some portion of the trip mechanism, thus insuring the proper action no matter in what position the broken rod may be. The laterally-extended catch-plate is thus an important feature of the invention and adds materially to the value, efficiency, and operativeness of the invention. The barbed arms 21 22 also serve an important purpose, as they materially assist in the action by engaging the material of the rod when of wood or other soft material.

Connected into the loop 11 is another elongated loop 24, to whose upper end the draft means 25 is connected, the two loops thus forming a "jar" between the draft means and grapple, which may be useful under some circumstances.

The grappling device may be of any size and of any required strength, and the parts may be modified in minor particulars without departing from the principle of the invention or sacrificing any of its advantages.

Having thus described the invention, what is claimed is—

1. A grappling device consisting of spaced resilient arms terminating in inwardly-extending claws and provided with longitudinal slots, and a bar movably disposed in said slots and provided with notches for engagement with the walls of said slots to maintain said bar in distended position, said bar having spaced barbed arms depending therefrom between the bar and claws, substantially as described.

2. A grappling device consisting of spaced resilient arms terminating in inwardly-extending claws and with intermediate trans-

verse apertures, a bar movably engaging said apertures and with notches for engagement with said arms to maintain them in distended position, and a catch-plate depending from
5 said bar at right angles to said claws and having its lower end offset to extend it into longitudinal alinement with the edges of said claws.

3. A grappling device comprising spaced resilient arms terminating in inwardly-extending and laterally-projected claws, a bar
10 having spaced notches for detachable engagement with said arms to maintain them in their distended position, and a catch-plate connected to said bar and extended into longitudinal
15 alinement with said laterally-projecting claws, substantially as described.

4. A grappling device consisting of a stock having at one end spaced resilient arms ter-

minating in inwardly-extending claws and having at the other end an elongated loop, a
20 correspondingly-elongated loop engaging said stock-loop and affording means for the connection of the draw-line, and a bar having spaced notches for detachable engagement
25 with said resilient arms to hold them in their distended position and provided with barbed arms depending therefrom between said bar and claws, substantially as described.

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

JAMES LUKE.

Witnesses:

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J. N. WAUGH.