April 28, 1925. 1,535,625

W. O'BANNON

SUCKER ROD ELEVATOR

Filed Jan. 26, 1923

Fig. 1.

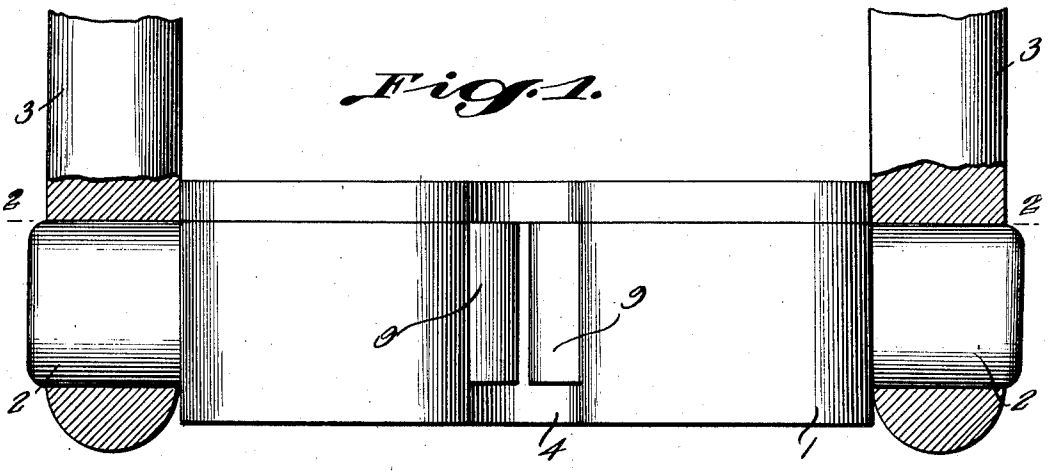
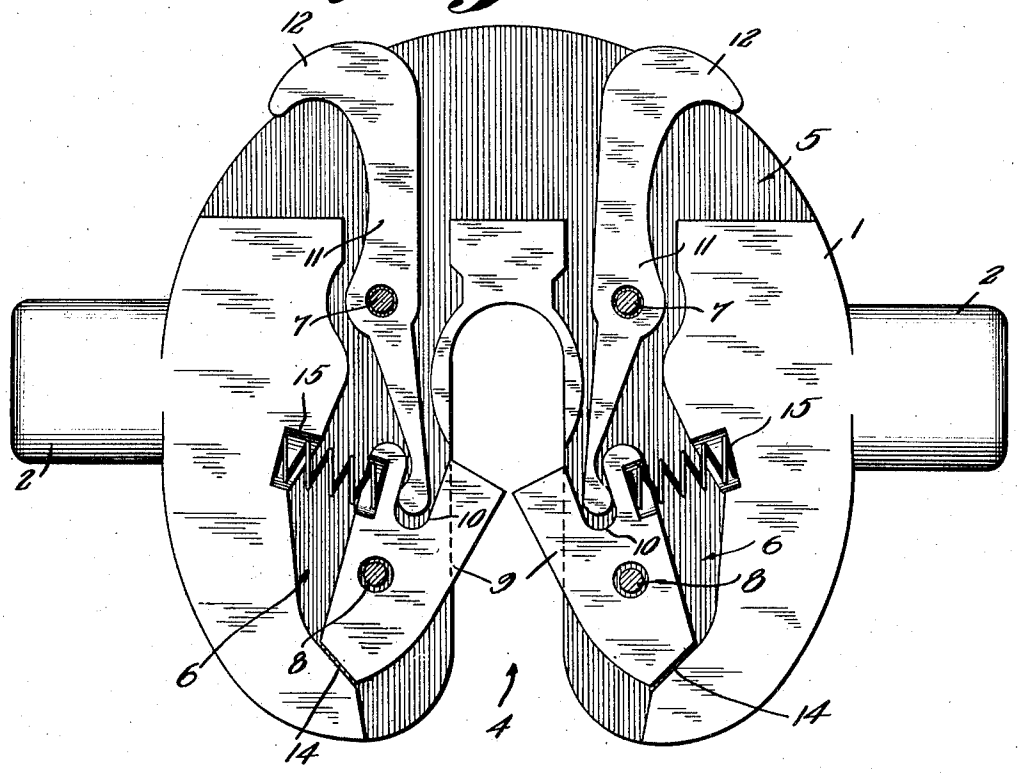


Fig. 2.



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UNITED STATES PATENT OFFICE.

WALTER O'BANNON, OF TULSA, OKLAHOMA.

SUCKER-ROD ELEVATOR.

Application filed January 26, 1923. Serial No. 615,049.

To all whom it may concern:

Be it known that I, WALTER O'BANNON, a citizen of the United States, residing at Tulsa, in the county of Tulsa and State of Oklahoma, have invented a new and useful Sucker-Rod Elevator, of which the following is a specification.

This invention aims to provide novel means for manipulating the latches in a sucker rod elevator and to provide novel means for taking the strain off the elements whereon the latches are fulcrumed.

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 can be made without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in elevation a device constructed in accordance with the invention, parts being in section; Figure 2 is a plan wherein the upper portion of the body of the tool has been removed.

The device forming the subject matter of this application comprises a body 1 provided with trunnions 2 adapted to cooperate with the usual suspension means 3. In one edge of the body 1, a notch 4 is formed. In the opposite edge of the body, an opening 5 is fashioned. Passages 6 are formed in the body 1, on opposite sides of the notch 4, the passages communicating with the opening 5. The constituent parts of the body 1 are held together by securing elements 7 and 8. Latches 9 are loosely fulcrumed on the securing elements 8 and are located in the passages 6, the latches projecting into the notch 4. The latches 9 are supplied in their inner ends with seats 10 wherein are loosely pivoted the ends of levers 11 fulcrumed on the securing elements 7, the levers extending along the passages 6 into the opening 5, and terminating in laterally extended finger pieces 12. Any suitable spring means may be provided for holding the latches 9 in the position shown in Figure 2 so that they will retain the sucker rod in the inner end of the notch 4. If desired, depressions 15 may be formed in the body 1 and in the latches 9, the depressions being adapted to receive the ends of compression springs 16 which serve to hold the latches in the position shown in Figure 2. This specific spring construction, however is not insisted upon.

The sucker rod is thrust between the converging inner edges of the latches 9, the latches tilt on their fulcra 8, the sucker rod passes to the rear end of the notch 4 and is there held by the latches 9. When it is desired to swing the latches 9 to an inoperative position and to release the sucker rod, this operation may be brought about by pressing the finger pieces 12 of the levers 11 together, the levers tilting on their fulcra 7 and swinging the latches 9 to such a position that they no longer hold the sucker rod in the notch 4. Should a force be exerted upon the sucker rod, tending to separate it from the body 1, the thrust will be received on the latches 9, and the latches will bear against the body 1 at the points marked by the numerals 14, these portions of the body acting as abutments which take the strain off the pivot elements 8 for the latches 9 and prevent a shearing of the elements 8, it being recalled that the latches 9 are so mounted on the elements 8 that the latches will abut against the body 1 at the points indicated at 14, before any strain is brought upon the pivot elements 8.

The inner ends of the latches 9 are inclined toward each other and toward the mouth of the opening 4, the result being that when a sucker rod in the opening, behind the latches, moves toward the mouth of the opening, the pressure of the sucker rod on the inner ends of the latches will tend to hold them closed.

What is claimed is:—

1. A sucker rod elevator comprising a body, pivot elements carried by the body, and latches having openings receiving the pivot elements, whereby the latches are mounted to swing on the pivot elements, the openings being of greater diameter than the pivot elements, so that the latches may move bodily, in the direction of their lengths, and transversely of the pivot elements, and engage the body, thereby reducing the strain on the pivot elements.

2. In a device of the class described, a body provided in one edge with a notch,

and provided in its opposite edge with an opening, passages being formed in the body on opposite sides of the notch, the passages communicating with the opening, latches fulcrumed in the passages, the latches projecting into the notch, the latches being supplied in their inner ends with seats, levers fulcrumed intermediate their ends on the body, the levers being loosely received at their inner ends in the seats of the latches, the levers extending rearwardly through the passages, and through the opening, and helical compression springs interposed between the latches at their inner ends, and the side walls of the passages, the said walls and the latches having means for retaining the springs.

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

WALTER O'BANNON.

Witnesses:
MILES KLIMA,
E. E. HUGHES.