

(No Model.)

W. H. HAY.
SUCKER ROD ELEVATOR.

No. 509,433.

Patented Nov. 28, 1893.

Fig. 1.

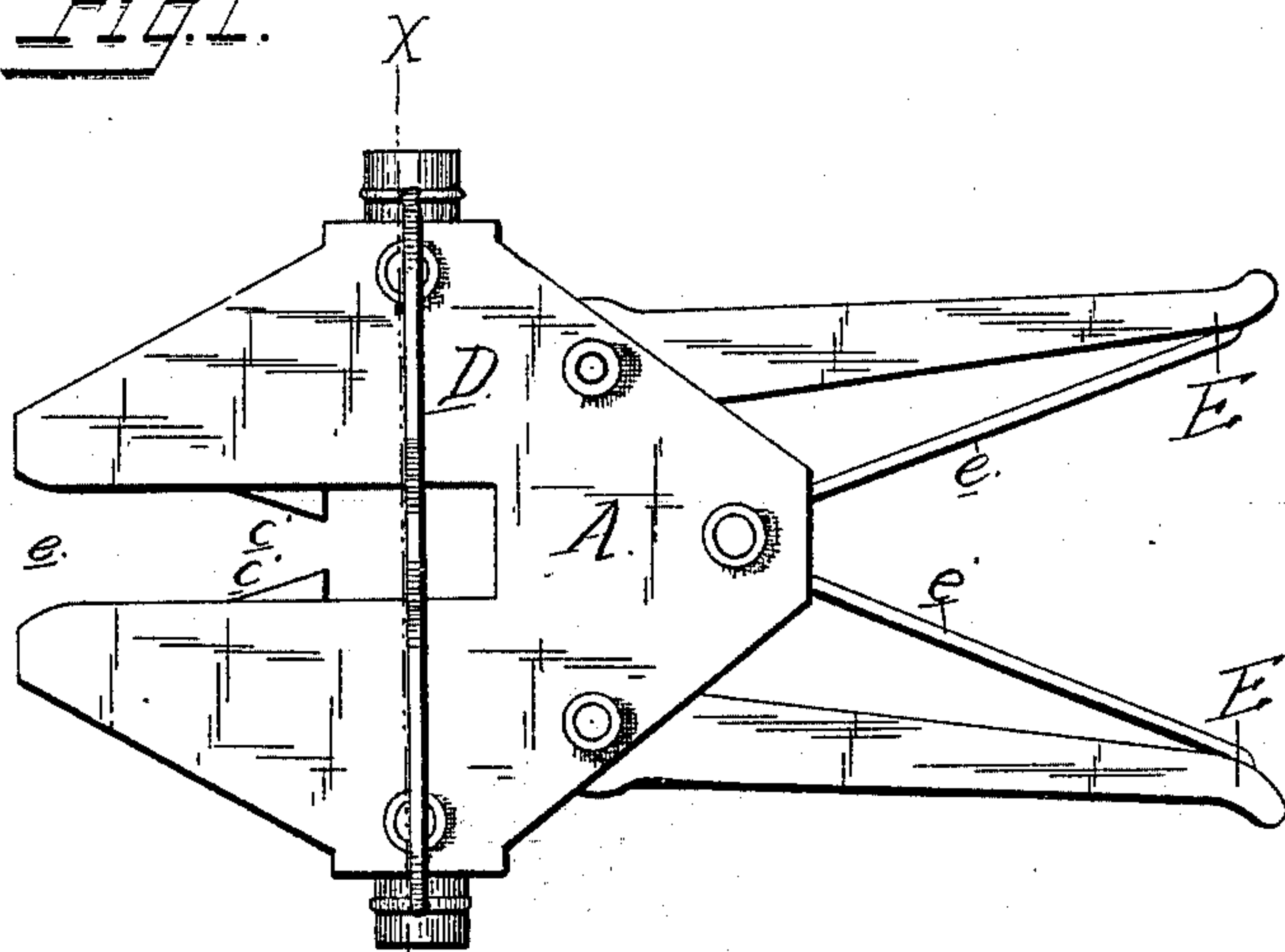


Fig. 2.

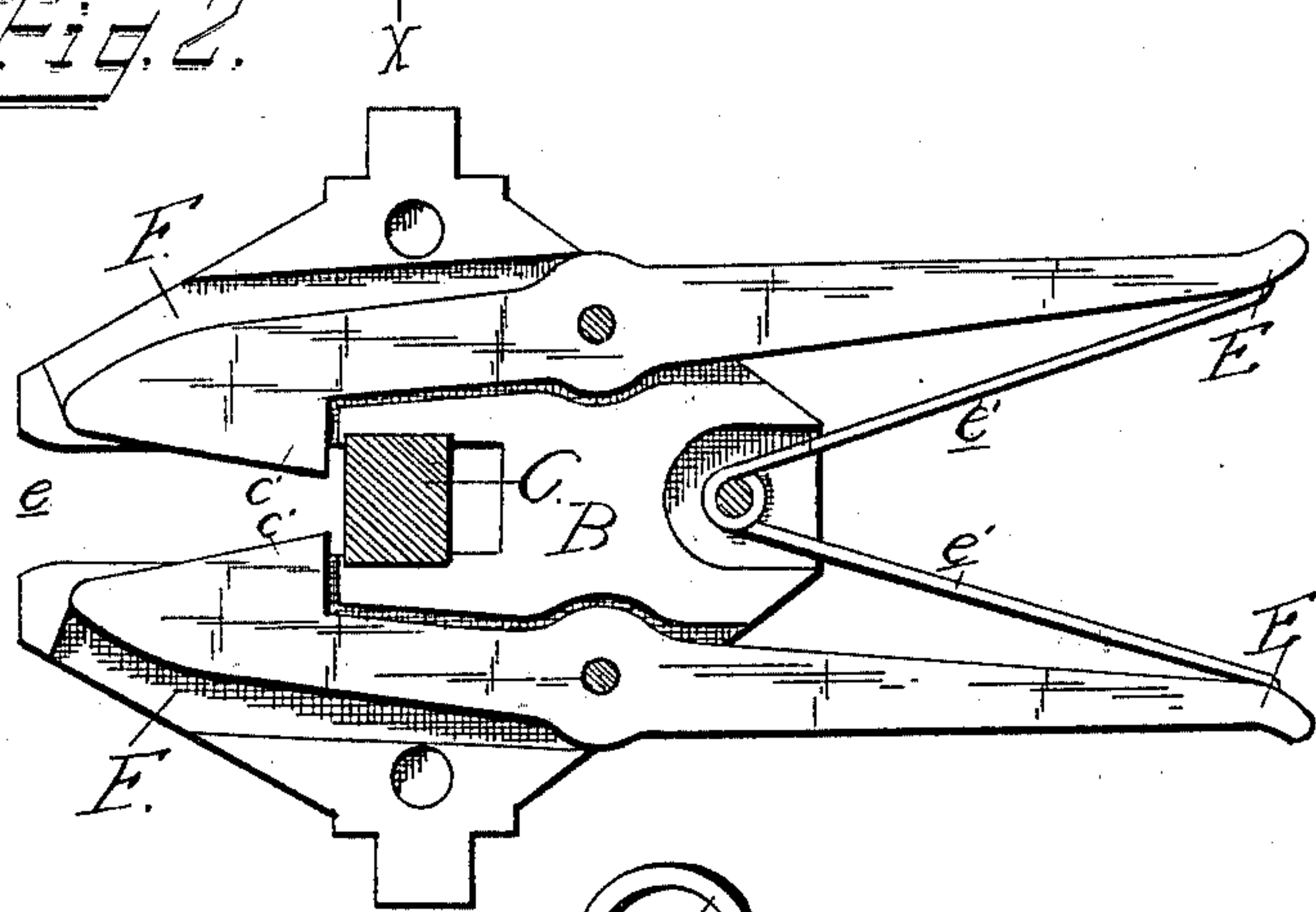
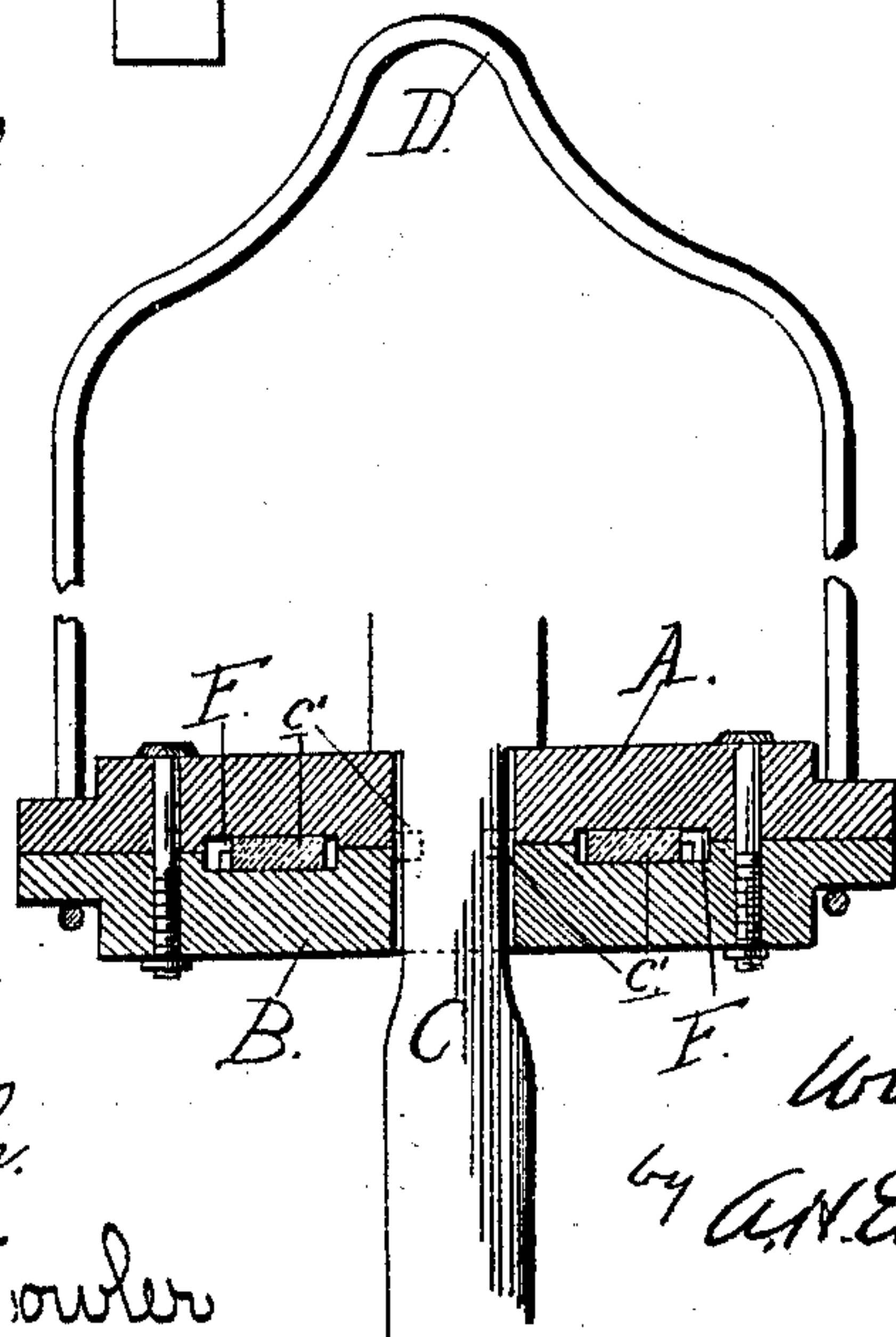


Fig. 3.



WITNESSES

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WILLIAM H. HAY, OF PROSPECT, PENNSYLVANIA.

SUCKER-ROD ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 509,433, dated November 28, 1893.

Application filed December 3, 1892. Serial No. 453,921. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HAY, a citizen of the United States, residing at Prospect, in the county of Butler and State of Pennsylvania, have invented certain new and useful Improvements in Sucker-Rod Elevators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, is a top view of my device. Fig. 2, is a horizontal section of the same showing the upper casing removed, and a portion of the rod held in position, and Fig. 3, is a vertical section through the line $x-x$ of Fig. 1.

My invention relates to an improvement in sucker rod elevators.

It has for its object to provide a device of this character for grasping and locking the squared end of a sucker-rod whereby it may be lowered or withdrawn from the well, and to prevent the sucker rod becoming accidentally released in lowering it into the well owing to accidental disconnection of the elevator from the hook which carries it or the slackening of the rope when the rod is submerged in water or oil.

With these objects in view the invention consists in certain features of construction and combination of parts which will be hereinafter described and claimed.

In the drawings:—A and B represent respectively the upper and lower plates forming the sucker-rod head. These plates are preferably exact counterparts and each is provided with a sucker-rod entrance e , two longitudinal recesses $a a$, a thickened central portion b in the rear end of which is formed a socket or recess c and with laterally semi-circular trunnions d .

$C' C'$ denotes jaws having their rear ends extending beyond the rear end of the head and terminating in handles $E E$. These jaws are placed in the longitudinal recesses $a a$ of the plates which plates are secured together by bolts $f f$, $g g$, and h the bolts $g g$, serving also as the pivots for the jaws while the bolt h serves to retain the spring hereinafter described. Located in the socket or recess c and coiled about the bolt h is a spring the diverging arms $e' e'$ of which bear against

the handles $E E$, and force them apart throwing the jaws toward each other. Should this spring lose its energy, or break it may be easily taken out by simply removing the bolt h without in the least distributing the other parts.

D , denotes the bail having eyes at its ends in which the trunnions freely turn. The bail is large enough to avoid contact at all points with the handles $E E$ so that should the rope to which it is secured become slackened and the bail swing down into a horizontal position it will not strike and operate the handles. This I deem important inasmuch as many of the elevators of this character are so constructed that when their bails swing down into the same horizontal plane with the head they will strike the operating ends or handles of the jaws and open said jaws thus rendering the sucker-rod liable to fall into the well. Moreover, the elevator cannot come loose from the rod and fall on the operator below, in case it comes loose from the hook on the line, which is one of the main points in my elevator as there have been several lives lost by the elevator thus falling. It is well known that when the sucker-rod is being lowered into the well and before it touches the water or oil it moves with greater rapidity than it does after it reaches the water or oil which to a certain degree checks its movement. This check to its movement causes the rope to which the bail is secured, to slacken and allows the bail to swing down into a horizontal plane. With my device, all possibility of the bail releasing the jaws is removed or obviated since the bail swings clear of the handle ends thereof.

In lowering the elevator into position to grasp the sucker-rod the head will of its own weight swing into a vertical plane in which position it will not be so liable to injure the workmen.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a sucker-rod elevator, the combination with the head constructed of two plates, jaws carried between said plates, bolts for securing the plates together, two of said bolts passing through the jaws to serve as pivots on which

the jaws turn, of a bail pivoted to said head, substantially as herein described.

2. In a sucker-rod elevator, the combination with the head formed of two plates, jaws piv-
5 oted between said plates and provided with rearwardly extending handles, bolts for clamping the plates together, two of which bolts form the pivots of the said jaws, a spring coiled around another one of said bolts and
10 having its arms extending rearward and bear-

ing against the handles to hold the same apart, the said spring being removable through the rear end of the head by simply unscrewing the bolt or screw on which it is mounted of the bail pivoted to said head, substantially 15 as herein described.

WM. H. HAY.

Witnesses:

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