

UNITED STATES PATENT OFFICE.

JAMES OLIVER KAFADER, OF FORT BIDWELL, CALIFORNIA.

PIPE PUNCH AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 462,800, dated November 10, 1891.

Application filed June 9, 1891. Serial No. 395,617. (No model.)

To all whom it may concern:

Be it known that I, JAMES OLIVER KAFADER, a citizen of the United States, residing at Fort Bidwell, in the county of Modoc and State of California, have invented certain new and useful Improvements in a Pipe Punch and Cutter; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The special object of the invention is to make a device by which Artesian-well pipes may be tapped or circles of holes punched therein and the pipe cut off where two casings are put in one well to economize the piping.

Figure 1 of the drawings is an elevation to show the invention closed up as it is when put in or turned in the tube or pipe; Fig. 2, a detail view in elevation of the wedge-bar and the punch-bar; Fig. 3, an elevation showing the punch-bars forced out, and Fig. 4 a cross-section.

In the drawings, A A represent the punch-bars pivoted at *a* in the frame B, which has two slots *b b'* at right angles to each other. In the former the punch-bars are pivoted at the upper ends, while in the latter run the two arms *c c* of the doubled bar C, which carries at its lower end the wedge D, tapering upwardly. The doubled upper end of the bar C engages an eye *e* of the rope-socket E, whose rope F is used to operate the wedge-bar C. G is the screw-jointed pipe by which the device is raised and lowered in the pipes which are to be punched or cut.

H are the four-sided punches, which make a dovetail joint with the bars A A, and are diametrically opposite to each other and are securely held by rivets *a'*. If two casings are put in the well and the pipe is to be cut, I employ the knives D' instead of the punches.

On the inside of the lower ends of the bars A, I arrange the anti-friction rolls I, the said ends being bent at right angles and slotted to receive the cross-pivots on which the rolls turn. The working faces of the wedge bear against these rolls. The wedge-bar C has a cross-pin *c'*, which strikes the upper part of frame, and thereby limits the upward movement of the wedge D.

When the punch-bars A A are closed, as shown in Fig. 1 of the drawings, the device is lowered into the pipe to the point where a circle of holes is to be punched, and then turned a small are repeatedly until all the desired holes in a circle are completed. Then the device is successively raised or lowered to every point where a circle of holes is to be made and the same operation repeated. When the pipe is to be cut, the operation is the same, except that the device is rotated at once in a full circle. The punches are employed to do what is known as "tapping" the pipe or casing.

Having thus described all that is necessary to a full understanding of my invention, what I claim as new, and desire to protect by Letters Patent, is—

The diametrically-opposite punches H H, secured in the outside faces of the lower ends of the pivoted bars A A, in combination with the slotted frame B and the wedge D, attached to the lower end of the doubled bar C, said frame being provided with a piping G and said wedge-bar with a lift-rope, substantially as shown and described.

In testimony whereof I have affixed my signature in presence of two witnesses.

JAMES OLIVER KAFADER.

Witnesses:

P. E. TAYLOR,
WM. G. LIGHT.

(No Model.)

J. O. KAFADER.
PIPE PUNCH AND CUTTER.

No. 462,800.

Patented Nov. 10, 1891.

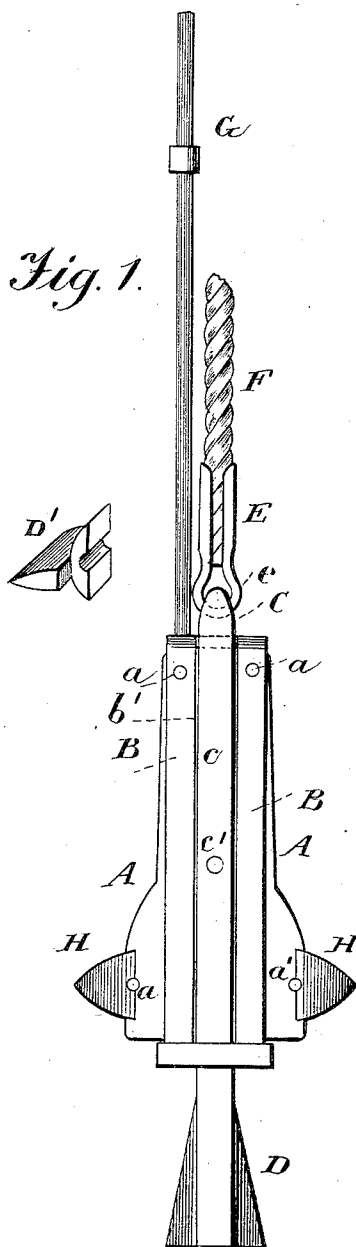


Fig. 2.

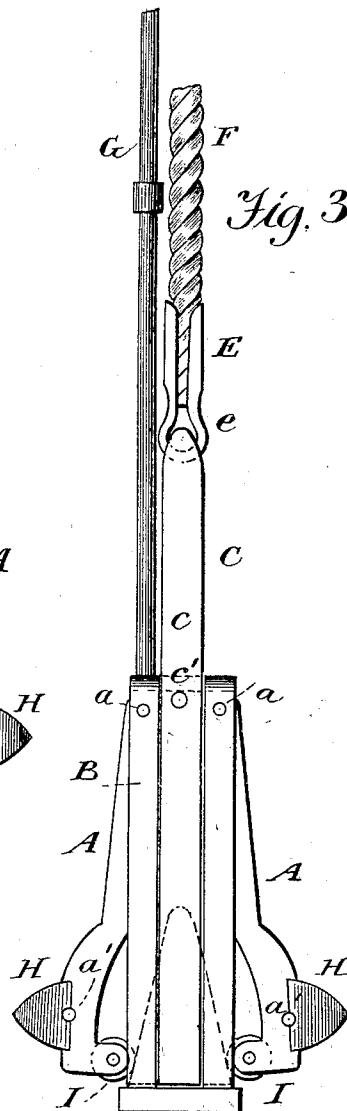
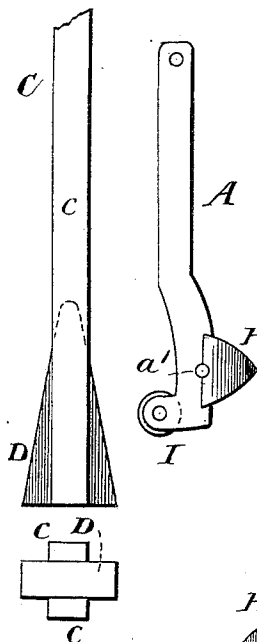
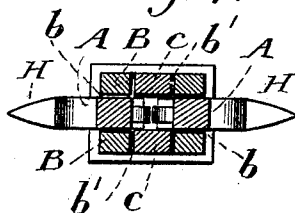


Fig. 4.



Witnesses.
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