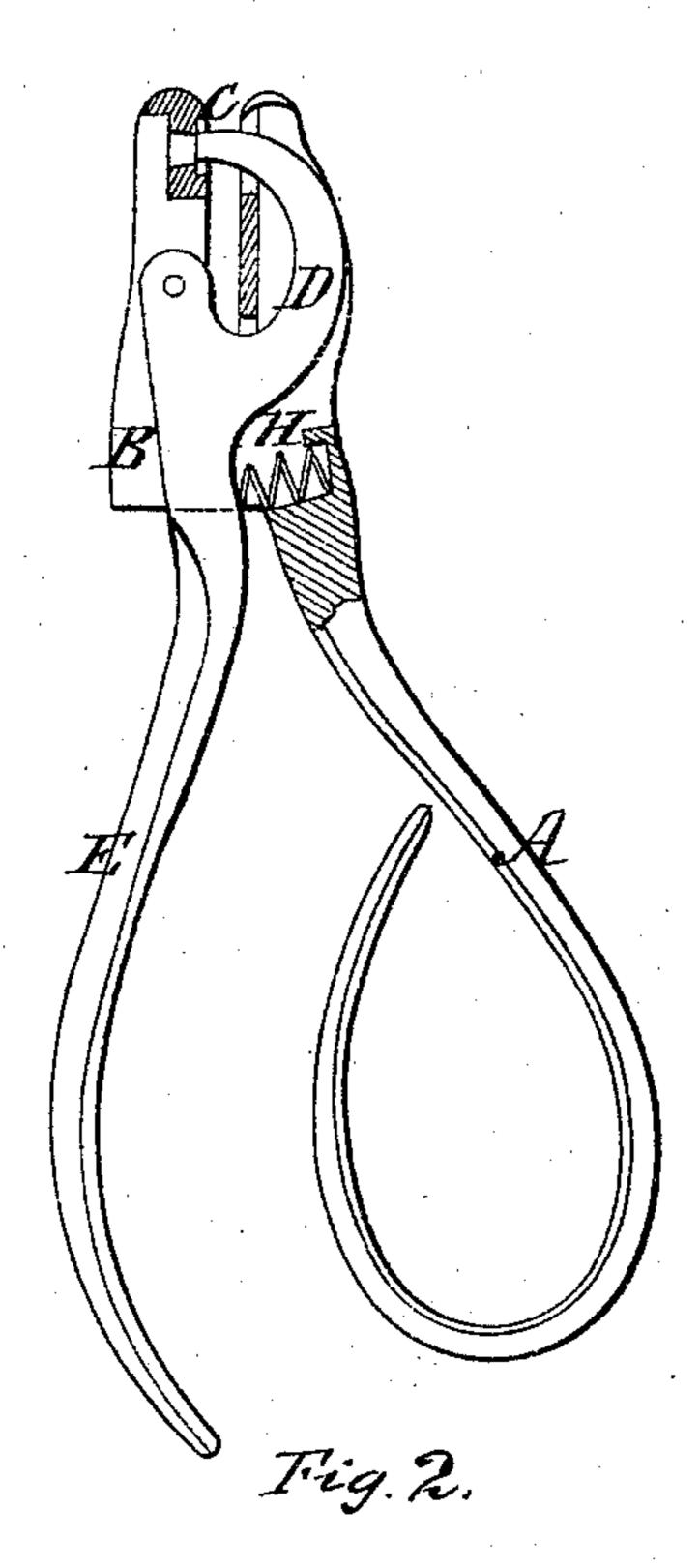
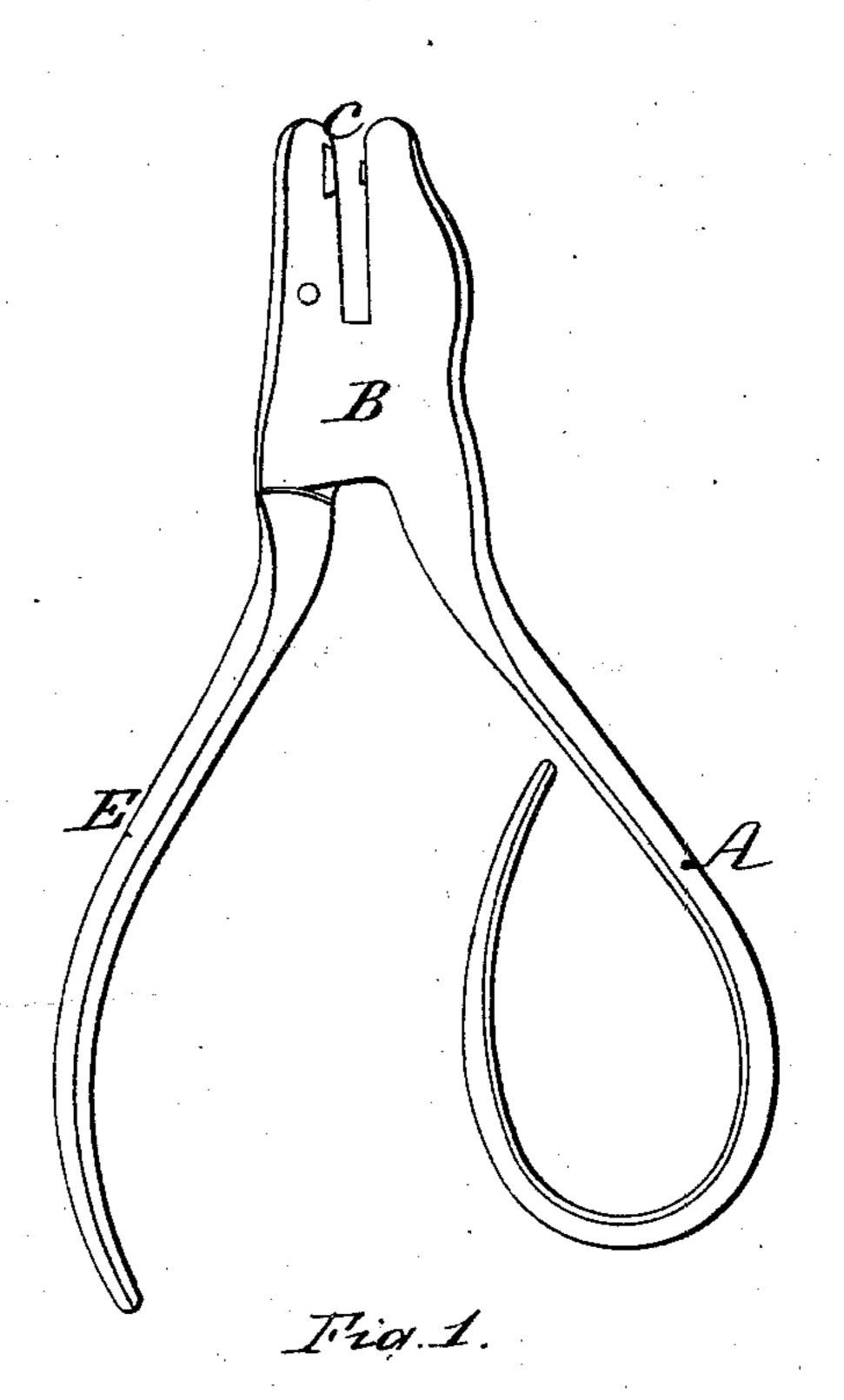
Palmer & Leslie.

Ticket Punch.

JY 86,438.

Patented Feb. 2, 1869.





Witnesses

Hohr Buchman.

Trevertor Thos Koleshi Chath & Palmer



CHARLES H. PALMER, OF NEW YORK, AND THOMAS K. LESLIE, OF BROOKLYN, NEW YORK.

Letters Patent No. 86,438, dated February 2, 1869.

IMPROVEMENT IN TICKET-PUNCH.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, Charles H Palmer, of the city, county, and State of New York, and Thomas K. Leslie, of Brooklyn, Kings county, New York, have invented, made, and applied to use, certain new and useful Improvements in the Construction and Operation of Ticket-Punches; and we do declare the following to be a full, clear, and correct description of the same, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a front view of our improved punch.

Figure 2 is a sectional view of the same.

In the drawings, like parts of the invention are

pointed out by the same letters of reference.

The nature of the present invention consists in pivoting the lever, to which is attached the punch, upon the same side of the offset upon which the female die is secured, for the purpose of giving to the punch a shearing-cut, so that it shall accomplish its work more readily, and with less effort to the manipulator; also, in improvements, as hereinafter set forth, in the construction of punches.

To enable those skilled in the art to make and use our invention, the following description of its construc-

tion and operation will be found sufficient.

A shows a scrolled handle, provided with an offset, B. This offset is jawed, and upon one of its jaws is secured the female die C, while its opposite jaw is slotted to receive and allow of the free movement of the punch D.

E shows a lever, having upon its upper end the hook-

shaped punch D.

This lever is pivoted upon the same side of the offset upon which the female die is secured, and at a point above the centre of a line drawn parallel with the face of the punch, and the end of the lever supporting the same.

A tapering pin is used in pivoting the lever to the offset upon the scrolled handle, while between the lower portion of the punch and the scrolled handle is placed a spiral spring, H, for the purpose of causing the punch to return to its original position, after the operation of punching has been effected.

Such being the construction, the operation is as follows:

The lever E, having upon it the hook-shaped punch, is inserted within the jawed offset B, so that the face of the punch shall be directly opposite to the female die C, and is pivoted, as shown, upon the same side of the offset B, upon which the female die is secured.

The ticket to be punched is placed between the jaws of the offset B, resting upon the female die C, and the lever E being depressed, the punch secured upon its upper end will be thrown forward, passing through the card or ticket, and forcing the punched portion of the card or ticket through the opening in the female die C.

During this operation of the lever E, the spiral spring H has been contracted, and the hand of the operator being removed from the lever E, the relaxation of the spring H materially hastens the return of the punch D to its former position, away from the female die, and

within the opposite jaw of the offset B.

It will be observed that the lever carrying the punch is pivoted at a point above the centre of a line drawn parallel with the face of the punch, the extreme end of the lever supporting the same, and that, by making this point the fulcrum upon which the lever operates to give to the punch a shearing cut, instead of the punch entering the ticket at once, it enters and cuts the same gradually, beginning at the lower end and cutting upward.

By such an arrangement of the parts, the work is much more easily performed, and all the advantages that would result from operating the punch by means

of a compound lever, are gained.

Having thus described our invention,

What we claim as new, and desire to secure by Letters Patent, is—

1. Pivoting the lever E supporting and operating the punch D, to the offset B, substantially as shown, and for the purpose set forth.

2. The combination of the lever E supporting and carrying the punch D, and pivoted as shown, with the scrolled handle, female die, and spring, for the pur-

poses substantially as described.

CHARLES H. PALMER. THOMAS K. LESLIE.

Witnesses:

A. SIDNEY DOANE, HENRY W. HENLEY.