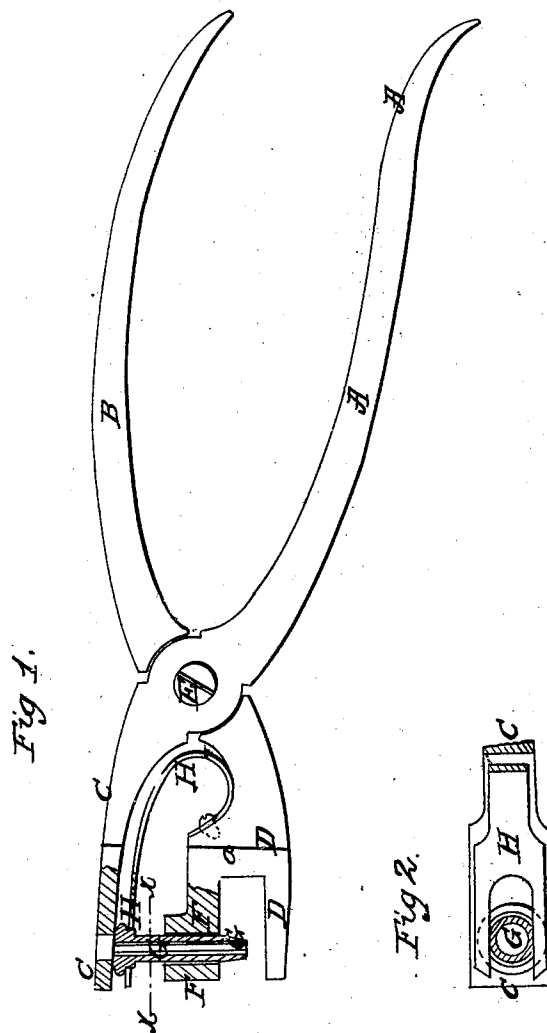


*J. D. Higgins,*  
*Hand Punch,*  
*No 80,349,      Patented July 28, 1868.*



*Witnesses;*  
*Wm A. Morgan*  
*Thos Encke*

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# United States Patent Office.

J. D. HIGGINS, OF GREENVILLE, CONNECTICUT.

*Letters Patent No. 80,349, dated July 28, 1868.*

## IMPROVEMENT IN HAND-PUNCHES.

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

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. D. HIGGINS, of Greenville, in the county of New London, and State of Connecticut, have invented a new and improved Hand-Punch; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side view, partly in section, of my improved hand-punch.

Figure 2 is an inverted transverse section of the same, taken on the plane of the line  $x x$ , fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to a new hand-punch, which is so arranged that the punch is always brought perpendicular against the die or lower jaw, whereby direct action, much power, and accurate work are obtained.

The invention consists in arranging a sliding, tubular, or solid punch in an arm that is parallel with and projects from the lower jaw, and in holding the punch by means of a spring constantly against the upper or pressing-jaw.

When the punch is to be used, it is, by the upper jaw, forced towards the lower one, but is at the same time always guided in the aforesaid arm, so as to remain perpendicular to the face of the lower jaw.

A B, in the drawing, represents the two handles of a hand-punch.

C D are the jaws projecting respectively from the same.

E is the pivot, by which the handles are connected. From one jaw, D, projects an arm,  $a$ , on which a box or guide, F, is formed, that is perforated, as shown, the axis of the perforation being perpendicular to the face of the jaw D.

G is the punch. The same is or may be tubular, and is fitted through the guide F, it being by a spring, H, held against the jaw C, as shown, its cutting-edge being opposite the jaw D. The spring is slotted, as in fig. 1, and catches under a head or shoulder of the punch.

The operation is simple and perfect.

If a belt or other article is to be punched, it is placed upon the jaw D, and the jaw C is then forced down, pushing the punch through the leather.

The punch is always guided in the box F, and can therefore not deviate from its straight course towards the jaw D, while heretofore such punches used to swing around the pivot of the jaws.

The jaw C, as it is forced up or down will slide over the head of the punch. It may be perforated, as shown, to receive and discharge the punchings.

The spring H, if attached to the jaws D, as shown, will not only serve to hold the punch against the upper jaw, but will also hold the jaws apart.

The same object may, however, be also obtained, by having a separate spring between the jaws, and another one to hold the punch against the jaw C.

I claim as new, and desire to secure by Letters Patent—

The detached tubular punch G, in combination with the guide-box F, formed upon the jaw D, the slotted spring H, and operating-jaw C, all arranged and operating as described, for the purpose specified.

J. D. HIGGINS.

Witnesses:

E. B. PARTRIDGE,

WM. H. PAGE.