

W. J. BRUNDRED.
Ticket-Punch.

No. 224.271.

Patented Feb. 10, 1880.

Fig. 1.

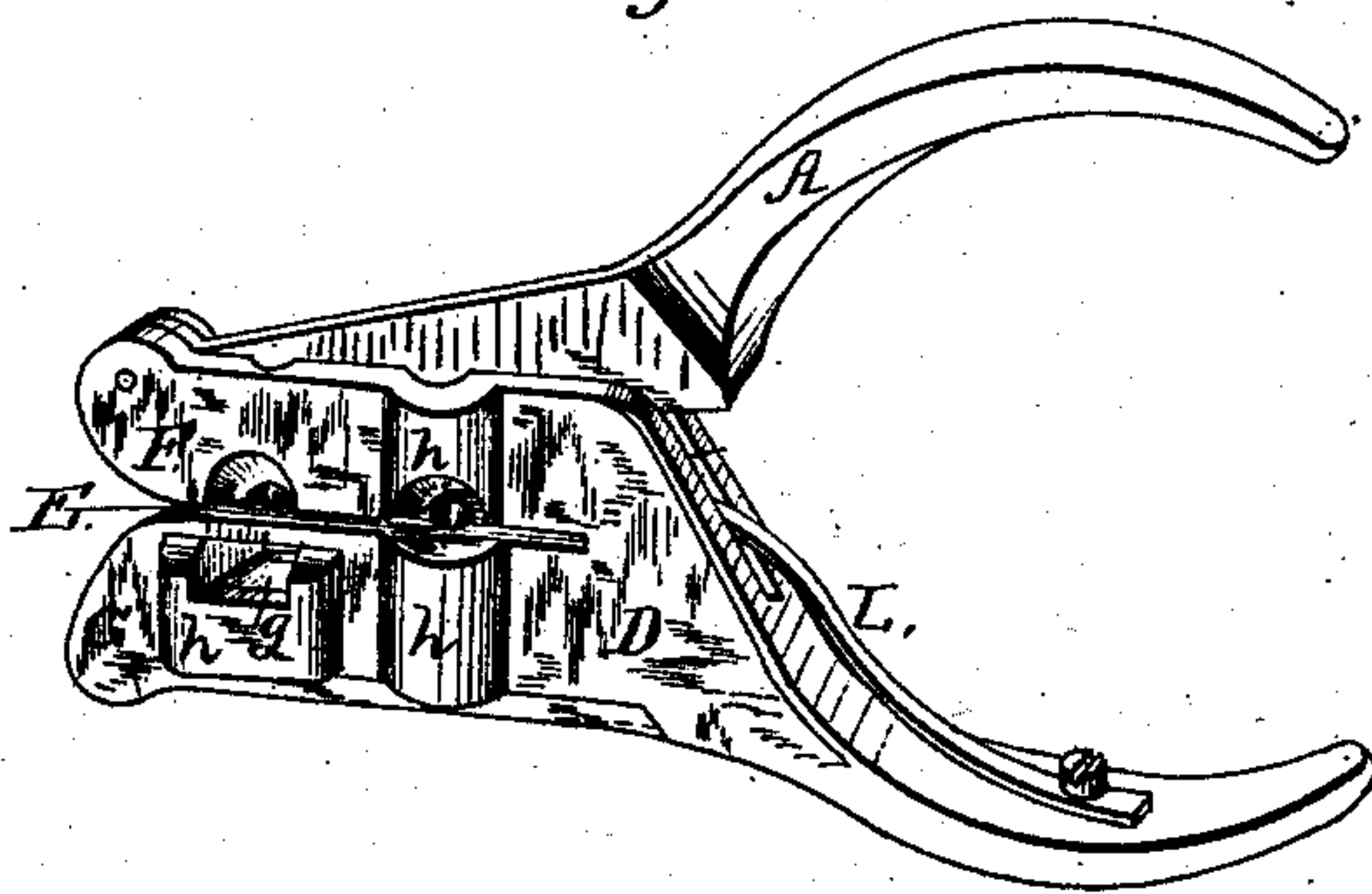


Fig. 2.

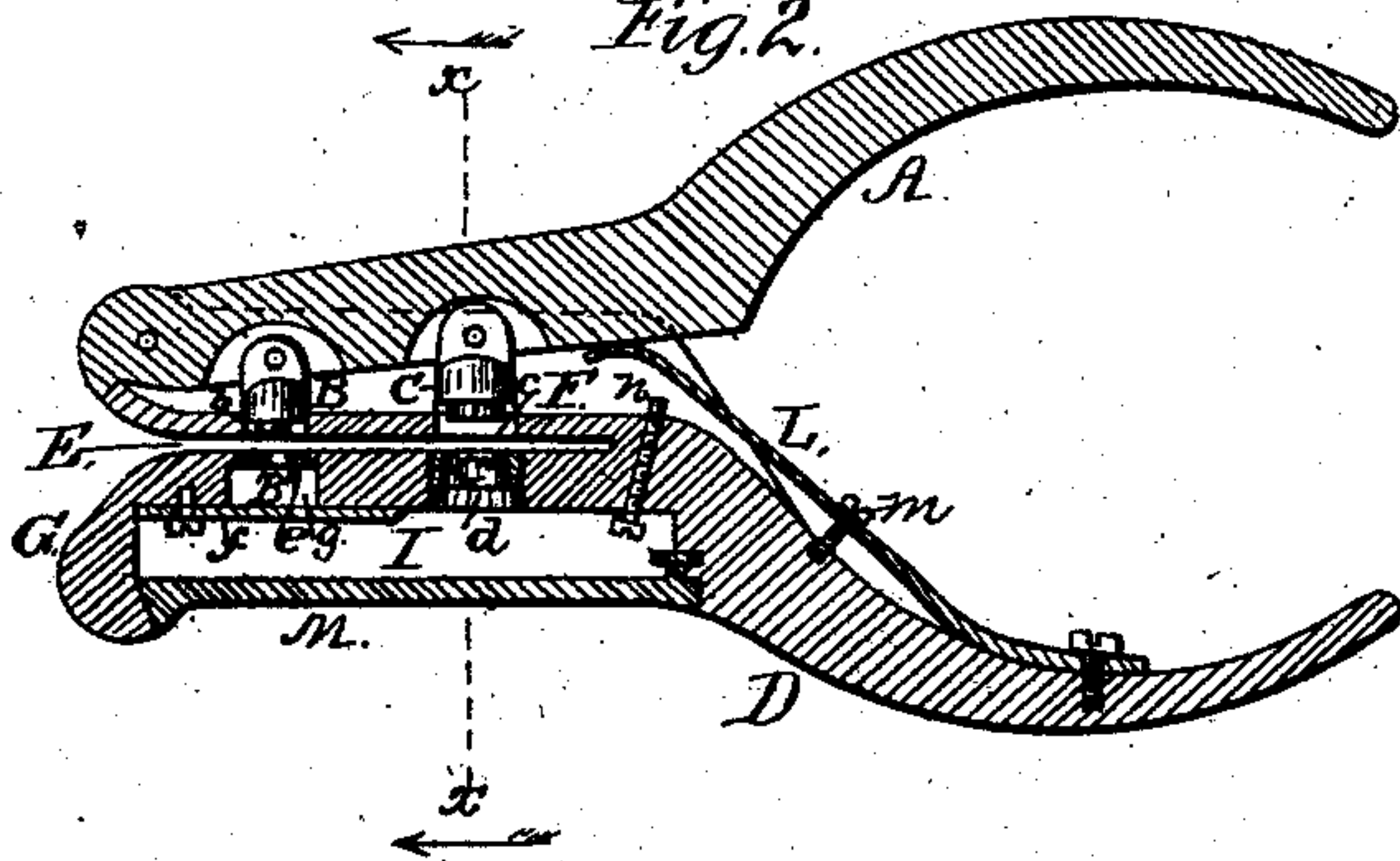
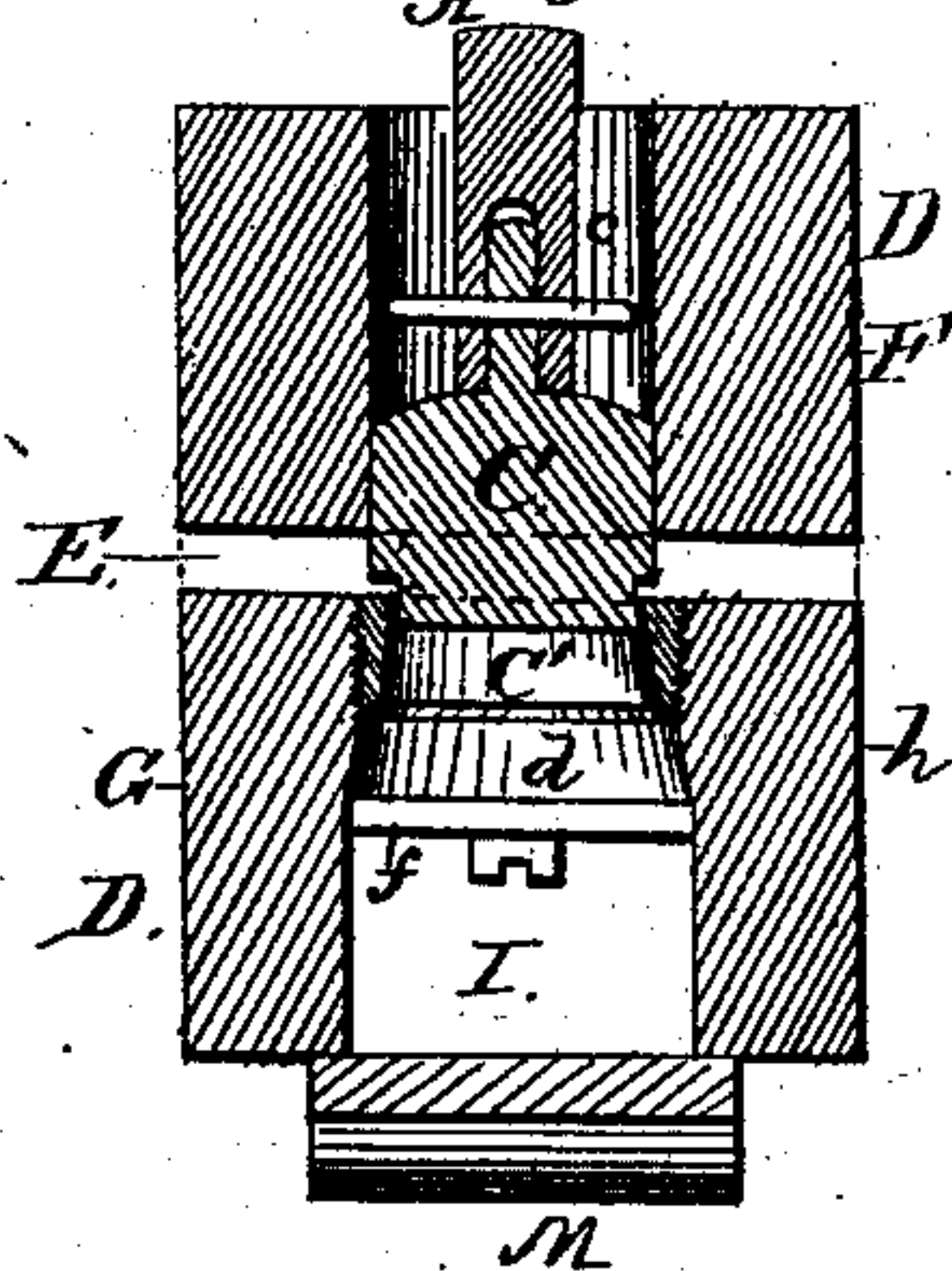


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE.

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TICKET-PUNCH.

SPECIFICATION forming part of Letters Patent No. 224,271, dated February 10, 1880.

Application filed November 4, 1879.

To all whom it may concern:

Be it known that I, WILLIAM J. BRUNDRED, of Oil City, in the county of Venango and State of Pennsylvania, have invented certain
5 new and useful Improvements in Ticket-Punches; 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
10 use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a perspective view of a
15 punch to which my improvements have been applied, and Fig. 2 a vertical longitudinal section of the same. Fig. 3 represents a vertical cross-section through the line *xx* of Fig. 2, on an enlarged scale, looking in the direction of
20 the arrows.

My invention relates to a novel construction of that class of ticket-punches intended for use on railroads, horse-cars, steamboats, omnibuses, in theaters, &c., which are provided
25 with a set of canceling-dies and a set of dies for clipping out and forcing a portion of each ticket sold by the conductor into a locked chamber, said clippings acting as a check upon clerks and others collecting moneys, fares, &c.
30

My improvement consists in constructing a punch with two sets of dies and but a single ticket-slot, the lower side of which carries both of the female dies, and these in the same
35 plane.

It further consists in such an arrangement and construction of the dies that the clipping from the outer punch will be ejected and the clipping from the inner punch saved for in-
40 spection, as will be hereinafter more fully described and shown.

Thus constructed, the forward or outer dies are used singly as a canceling-punch for all tickets issued by the officers at the regular
45 offices of the company, and are only used in connection with the inner punch or dies when the conductor himself receives the fare and issues a ticket or receipt therefor. In all cases the clippings of the canceling-die are
50 ejected from the punch and the clippings from

the other die are passed into a locked receptacle and saved for inspection.

The dies of the outer canceling-punch are made in such form as will denote the party who alone is entitled to use it, it having the
55 character of an individual mark or brand, each conductor having his own brand or style of canceling-punch.

The inner punch or dies are used only for punching from the passenger or other ticket
60 or card the amount of money collected by the conductor from a passenger, or the amount of money collected by the cashier of any business establishment using the punch, or any number or letter denoting a railroad-station,
65 or for any other analogous purpose. The principal feature of the use of the latter punch is that it cannot be used without at the same time using the outer or canceling punch upon the same ticket, thus designating by the par-
70 ticular form of the canceling punch or dies the party who collected the money and used the punch.

My invention also consists in certain details of construction, which will be hereinafter
75 fully described, and set forth in the claims.

To enable others skilled in the art to make, construct, and use my invention, I will now proceed to describe it in detail, omitting a particular description of such parts of a ticket-
80 punch as are old and common to the art.

In the accompanying drawings, Figures 1 and 2, the punch is represented as consisting of two main portions or parts—to wit, the actuating-lever A, which carries the male dies
85 B and C', and the part D, partially divided by a slot, E, into an upper and lower prong. The upper prong, F, is slotted vertically, and forms a guide for lever A and the two male dies B and C. Suitable openings for the reception and
90 guidance of the male dies are pierced clear through said prong in a vertical direction, as shown at Fig. 3.

The male dies B and C are secured, or rather pivotally connected, to the lever A in the man-
95 ner clearly shown in Figs. 2 and 3, and which enables them to descend in a straight line to cancel a ticket or punch out a clipping, while the lever itself moves in the arc of a circle. In this connection it may be observed that
100

the openings *b* and *c* on the under side of the upper prong form mere guides for the passage of the male dies to and from the female or cutting dies.

5 The lower prong, *G*, carries the female dies *B'* *C'*—*B'* forming the female die for the canceling-punch *B*, and *C'* the female die for the punch *C*, which cuts out the clippings from the tickets, cards, &c., which indicate the
10 amount of money or fare, &c., received, and from and through which the clipping is dropped or pushed through the channel *d* into the locked receptacle *I* below, the female die for this purpose, as it opens downwardly, being
15 made of a flaring shape to facilitate the discharge of the clippings.

In inserting the female dies *B'* and *C'* they are made externally of circular form, and provided with peripheral male screws, by means
20 of which they are screwed into the lower prong, *D*, from the receptacle *I* below, suitable openings for their reception having been previously made, and provided with corresponding female screws in said prong. This construction is
25 well illustrated in Figs. 2 and 3.

By reference to Fig. 2 it will be seen that all communication between the passage *e*, which leads from the canceling-punch *B*, after the female die *B'* has been inserted, is cut off by a
30 removable screw-plate, *f*. Passage *e* at its lower end opens into a channel, *g*, which runs from side to side of the punch, and through which the clippings from the canceling-punch are discharged as cut. These large openings
35 for the female dies naturally weaken in a lateral direction the prong of the lower part of the punch, to remedy which I cast with the prongs enlargements *h*, of any suitable size and shape, which give them more than suffi-
40 cient strength to resist all strain necessarily and ordinarily used in the operation of the punch.

L, Figs. 1 and 2, represents a spring, secured at one end to the lower part, *D*, of the punch,
45 and bearing at its free end upon the under side of the lever *A*. The object of this spring is the same as in other punches—to wit, to keep the male and female dies apart, that the slot *E* of the punch may be always ready to receive
50 a ticket to be canceled. In connection with this spring, however, I use a set-screw, *m*, by which the pressure of the spring upon the lever *A* can be always adjusted at will. This screw is passed through spring *L* into the
55 handle part of the lower half or part, *D*, of the punch. (See Fig. 2 of the drawings.)

In the same half or part *D* of the punch, near the free end of the spring *L*, is arranged a set or regulating screw, *n*. As a rule, I pre-
60 fer to insert it from the upper side through the vertical slot in which the lever *A* works to inserting it from the under side through the receptacle or chamber *I*, as its head is then in the way of the clippings. By turning this
65 screw so as to make it approach or recede from the spring *L*, it thereby regulates, by arresting at the proper point the descent of the

lever *A*, the depth at which the male dies are allowed to penetrate into the female dies, and thus saves the latter from much wear and tear. 70
It also prevents unnecessary strain on the dies after they have performed their work, as also the danger of springing or straining the punch by continued pressure of the hand on the lever after the dies have passed through the 75 ticket or paper.

M represents the door which covers the receptacle *I*, and which can be made and locked fast in any suitable and known way. The receptacle *I* is for the reception of the clippings, 80 and which are preserved therein for delivery to the party duly authorized to receive them.

Thus constructed, the operation of the punch is as follows: When the conductor receives a ticket which has been bought at a regular 85 ticket-office of the company he only inserts it sufficiently far into the slot *E* of the punch to bring it under the outer or canceling dies, *B* *B'*. This punch has no connection with the locked chamber or receptacle *I* for the recep- 90 tion of the clippings, as it is not designed to preserve the clippings from said tickets; but when the conductor receives money for the fare of a way-passenger, or one who at starting had failed to procure a ticket at the regular office, 95 and gives the passenger, as he is required to do, a ticket or receipt for such fare, then he is required to punch out on the ticket or receipt thus given the amount thus received by the inner punch or dies, *C* *C'*, the male die of which 100 forces the clippings down through the female die into the locked chamber *I* below; where they are preserved for inspection by the parties duly authorized to do so. In thus punching with the inner punch and preserving the 105 clippings from the tickets issued by the conductor, the ticket or receipt is also punched by the outer or canceling punch, and thus each ticket sold by him is canceled by his own brand-punch, showing who issued the ticket, 110 as well as the amount paid him; or where the ticket does not show the amount paid, but only the places where the passenger entered and left, the inner punch may be used for clipping those out and preserving for inspec- 115 tion the clippings thus made in the locked receptacle.

From what has been said it will be evident that the punch can be used with great advantage on steamboats, horse-cars, omnibuses, in 120 theaters, &c.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A ticket-punch having two jaws, one of 125 which carries two male dies, while the other is provided with a single ticket-slot, in which two female dies are correspondingly arranged, and with a locked receptacle, whereby one of the clippings of each ticket issued by the con- 130 ductor, &c., is ejected from the punch and the other saved for inspection, in the manner substantially as set forth.

2. In a ticket-punch having a single ticket

slot and a locked receptacle for holding clippings from the tickets, the combination of two male and two corresponding female dies, the latter being both arranged in the ticket-slot, 5 whereby one of the clippings of each ticket issued by the conductor, &c., is ejected from the punch and the other saved for inspection, in the manner substantially as set forth.

3. In combination with the two levers of 10 the jaws of a punch, a spring, *m*, provided with a set-screw to regulate the pressure, substantially as set forth.

15 4. A ticket-punch having the two jaws hinged at their forward ends, the upper one carrying two male dies and the lower one carrying a ticket-slot and two corresponding female dies, a spring to keep the jaws automatically apart, and an adjusting-screw, *n*, to regulate the depth of penetration of the dies, and

to relieve the jaws, levers, and dies from strain, 20 substantially as set forth.

5. A ticket-punch the two jaws of which are hinged at their forward ends, one provided with two male dies and the other with a single ticket-slot, and two corresponding circular female 25 dies having screw-threads on their outer periphery, a slot for the discharge of the canceling-clippings, and a receptacle for preserving the fare-clippings for inspection, and a spring to automatically keep the jaws apart, 30 substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of October, 1879.

WILLIAM J. BRUNDRED.

Witnesses:

B. F. BRUNDRED,

B. C. SIMPSON.