

J. Chapin.

Ticket Punch.

N^o 89,828.

Patented May 4, 1869.

Fig. 2.

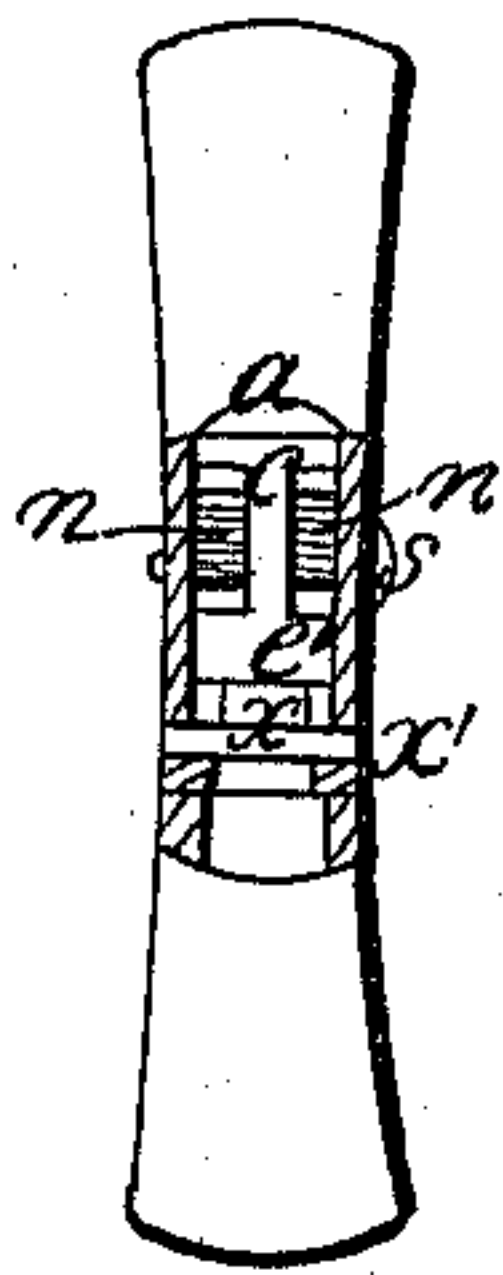


Fig. 1.

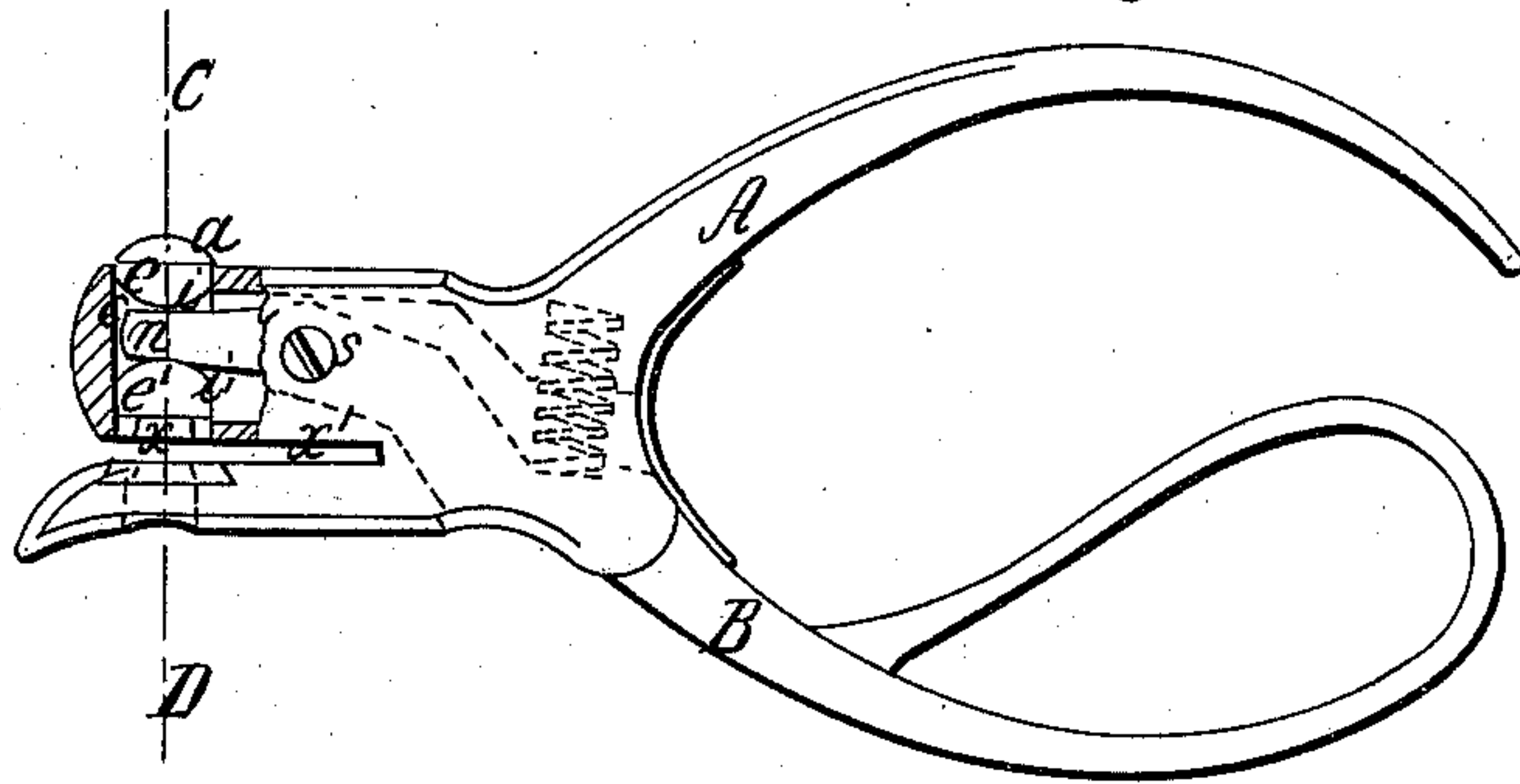


Fig. 3.



Fig. 4.

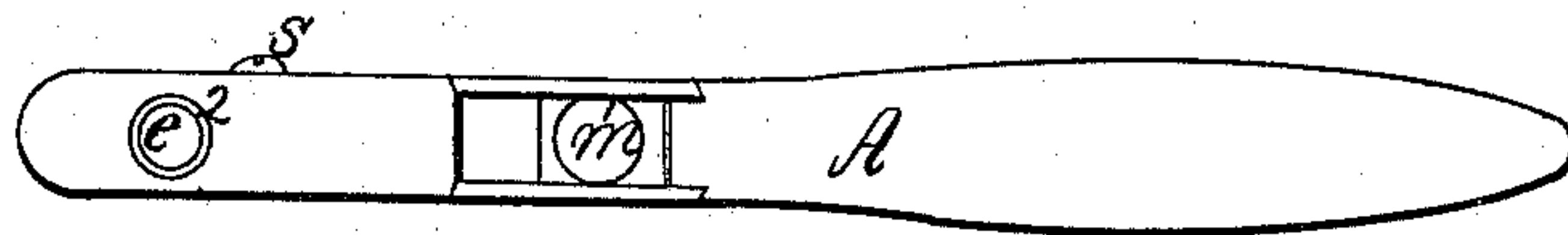


Fig. 5.



Fig. 6.



Witnesses;
H. E. Reel
J. H. Curtis

Inventor;
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United States Patent Office.

JOHN CHAPIN, OF CHICOPEE, ASSIGNOR TO R. H. SMITH, OF
SPRINGFIELD, MASSACHUSETTS.

Letters Patent No. 89,828, dated May 4, 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 I, JOHN CHAPIN, of Chicopee, in the county of Hampden, and State of Massachusetts, have invented a new and useful Improved Ticket-Punch; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a side view of the punch ready for use, the part around the die being broken away, to show the details of construction.

Figure 2 is a vertical transverse section, through line C D of fig. 1.

Figure 3 is a view of the slotted lever B.

Figure 4 is a view of the lever A, having the bearings or perforation e^2 , in which operates the punch or die.

Figure 5 is a front view of the die or punch.

Figure 6 is a side view of the same.

My invention relates to that class of punches known as conductors' or ticket-punches; and consists in the arrangement and construction of the same, wherein the die or punch is made cylindrical at or near each end, or of any desired form at the ends, which may have a bearing in a socket, said parts or ends being connected by a thin portion or blade, and being operated in their bearings by means of a slotted or forked lever, said lever having its bearing upon each side of the thin part or blade, to operate it.

That others skilled in the art may be able to make and use my invention, I will proceed to describe its construction and application to use.

In the drawings—

A represents one of the levers, having a chamber therein, into which is inserted the slotted end of the lever B, as shown in dotted lines in fig. 1, said levers being secured together by means of the screw or pivot s.

In the chambered end of said lever A is also the cylindrical perforation e^2 , as shown in fig. 4.

The die or punch a may be made cylindrical, or of any other desired form, at the ends e and e' , said parts e and e' being connected by the thin portion or blade c .

The lower side of the upper portion e , and the upper side of the lower portion e' , are curved, or partially circular, as shown at i and i' , in order that the slotted end n of the lever B may have always the same bearing to operate the punch or die a , no matter in what position said punch or die may happen to be.

One end of the lever B has a slot, n , made therein, and this end of said lever is passed into the chamber in the lever A, and they are then secured together, as hereinbefore described.

A recess, m' , is made in the lever A, and when the levers are placed together, a spiral spring is placed between said levers, one end of said spring resting in the recess m' , the other end bearing against the part m of the lever B, as shown in dotted lines in fig. 1.

The die or punch a is inserted in the perforation or socket e^2 , with its cutting-part x near the slot x' , and I prefer, for the sake of convenience and facility of manufacture, to make the ends e and e' , of the punch, cylindrical in form, said parts e and e' having

a bearing in the socket e^2 at their peripheries, and, the slotted lever B being secured in place with the blade c of the die, in the slot n , and between the two projecting parts n , which have a bearing against the curved parts i and i' , the punch is ready for use.

If now the two long arms, of the levers A and B, be forced together, the projections n press upon the curved portion i , forcing the die or the cutting-portion x down through the slot x' , and into the counter-die.

The pressure being removed from the levers, the spiral spring forces the long arms apart, the projections n pressing against the part i , and withdrawing the part x from the counter-die and slot x' .

It will be seen that the chamber, in which operates the short or slotted end of the lever B, is enclosed on all sides, which more fully and completely prevents the accumulation of dirt and foreign matter around and between the working-parts of the punch, while there is still sufficient space to permit a free and uninterrupted movement of all said parts.

I am aware that a device has heretofore been used, wherein the die or punch was operated by the short arm of a lever, having a bearing upon one side only of said die, as shown in Letters Patent, No. 53,382, granted to Andrew L. Eckert, and dated March 20, 1866, and I disclaim any and every part of said Eckert's device, when considered irrespective of my arrangement and construction, as herein described.

As, under the present system of conducting railroad-business, the conductors usually have a distinctive and separate character, figure, or device, each from the other, for the purpose of facilitating the settlement of their accounts, it is necessary that, in the operation of their punches, having different characters or devices, there should be no possibility of variation in their operation, otherwise the perfect form of the character in the punch would soon be spoiled, and the cutting-portion ruined.

My improvement most perfectly accomplishes the desired accuracy of movement in this respect, as the two projections n , when properly fitted to the blade c , guide the punch or die a in its movements with greater precision and accuracy than one such, bearing upon only one side of the die, could do, while the operations of the die and lever being within an enclosed space, or a chamber, there is no danger of any disarrangements of parts from the accumulation of dirt.

I therefore consider my device as a great improvement upon the invention of said Andrew L. Eckert; and having described my invention,

What I claim as new, as such improvement, and desire to secure by Letters Patent, is—

A ticket-punch, wherein the die, having the bearings e and e' , connected by a thin portion or blade c , is operated, by means of a lever, having two projections n thereon, one upon each side of said blade c , all constructed and operating substantially as herein described, and for the purposes specified.

JOHN CHAPIN.

Witnesses:

T. A. CURTIS,
F. E. RICE.