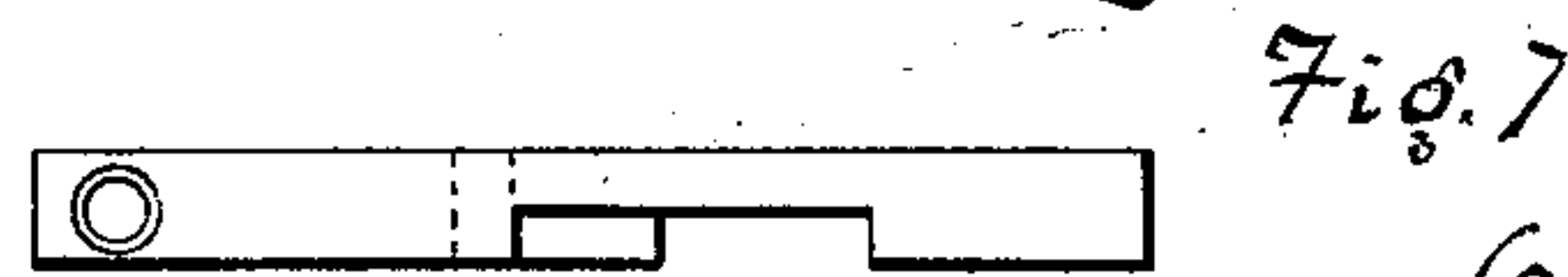
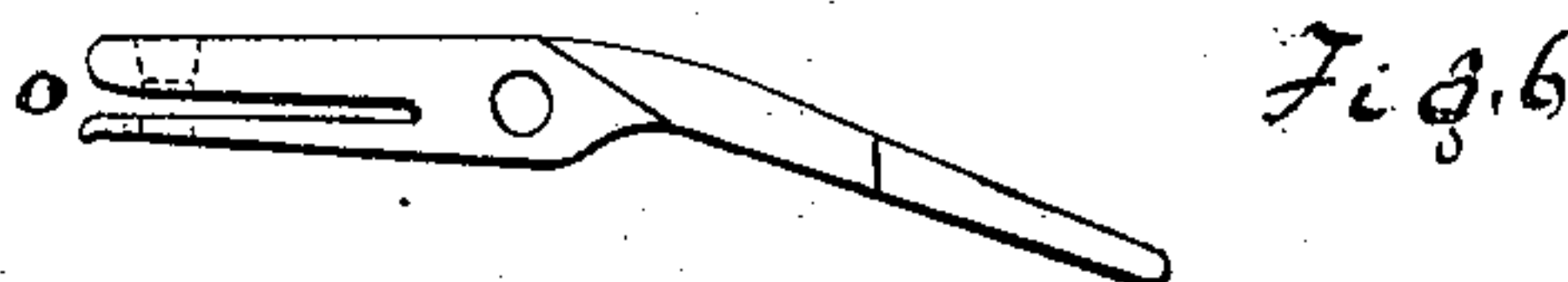
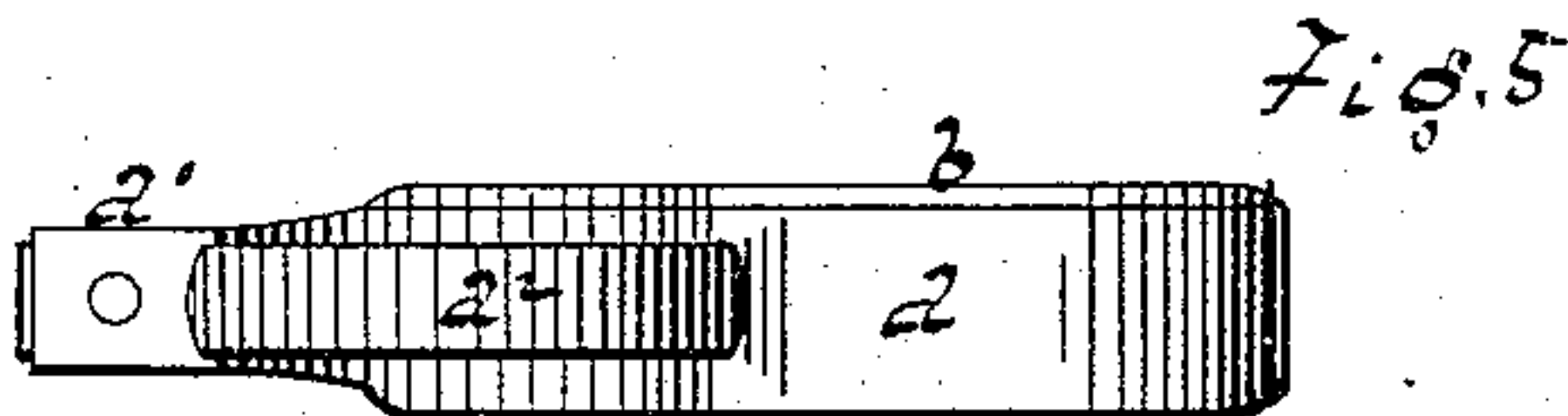
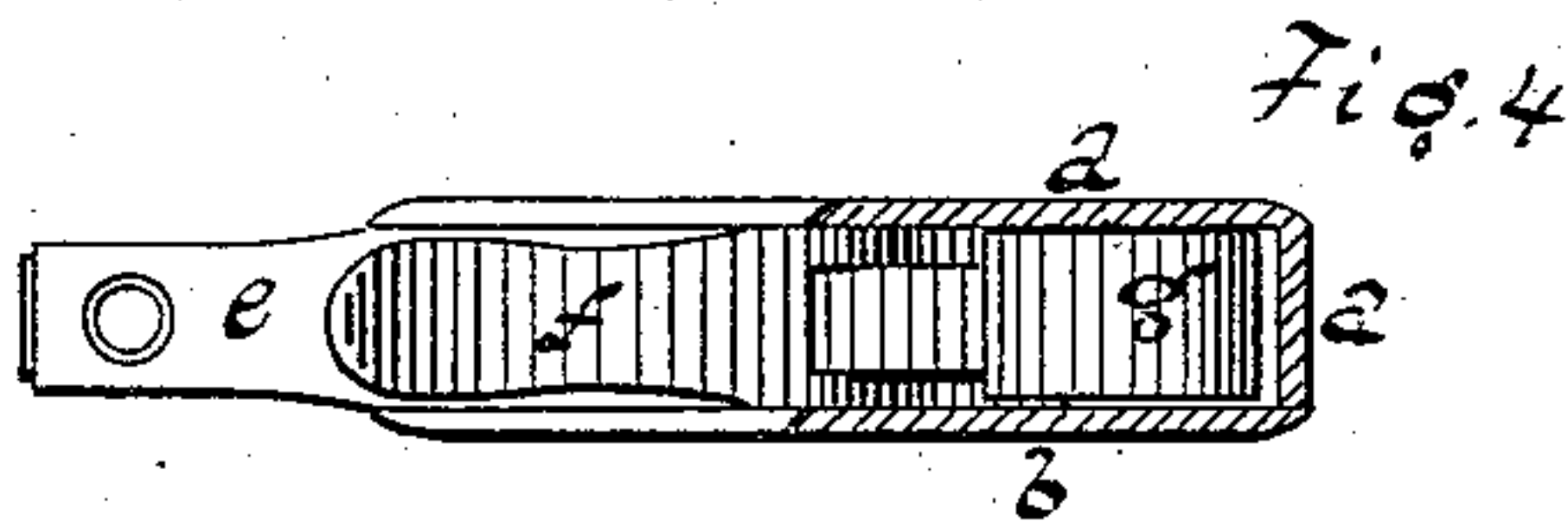
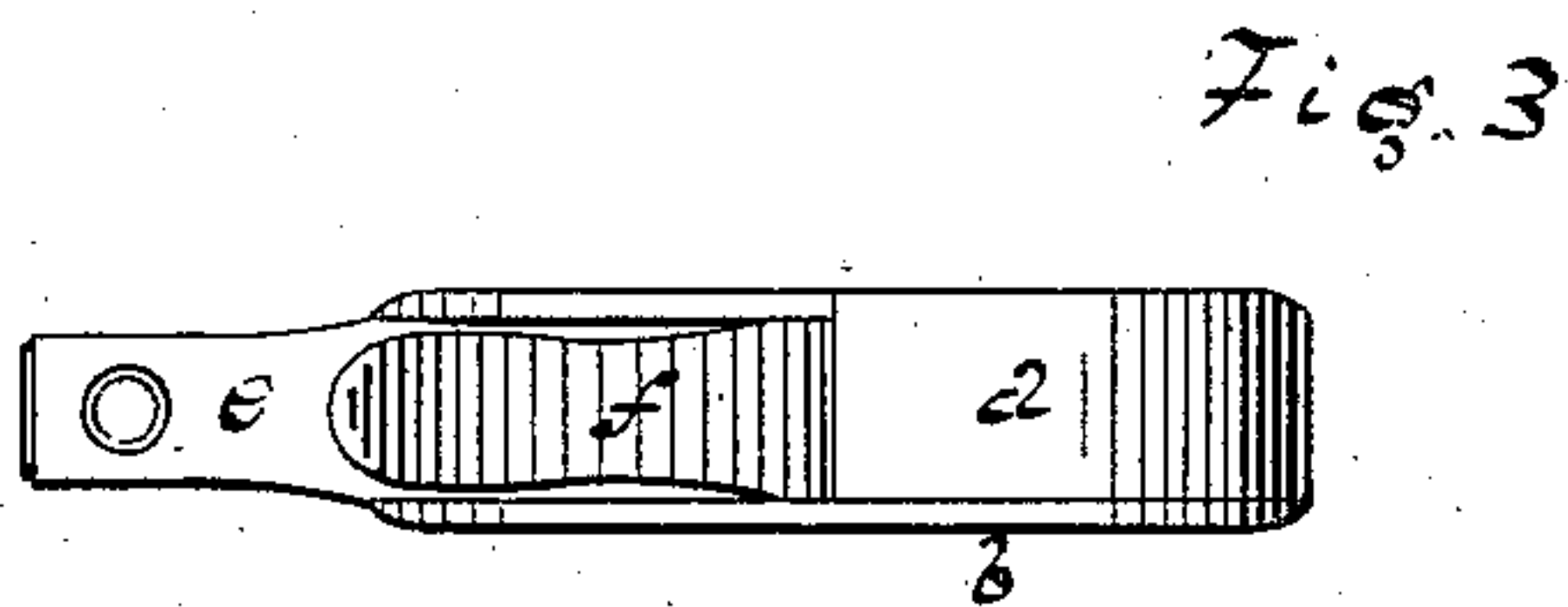
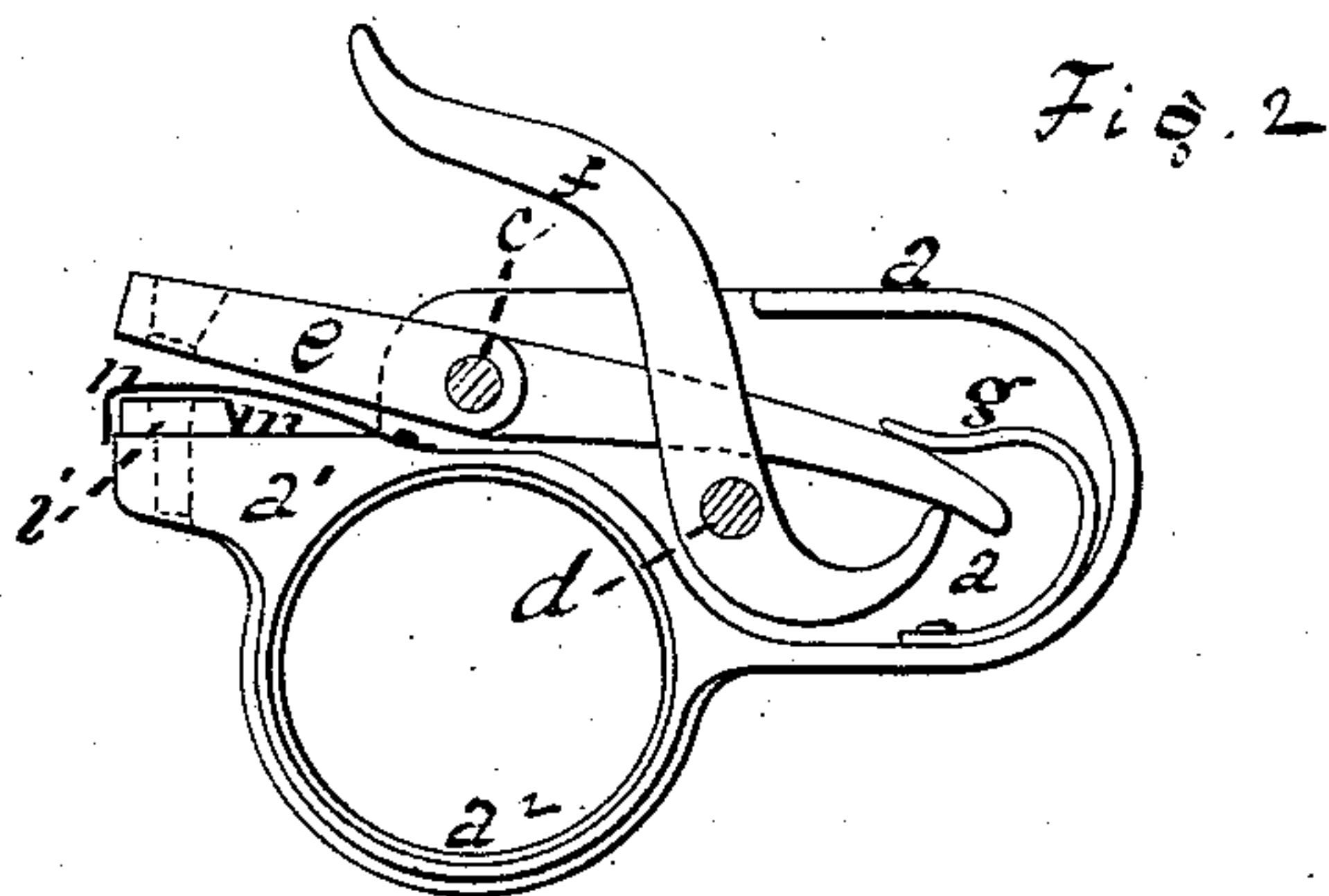
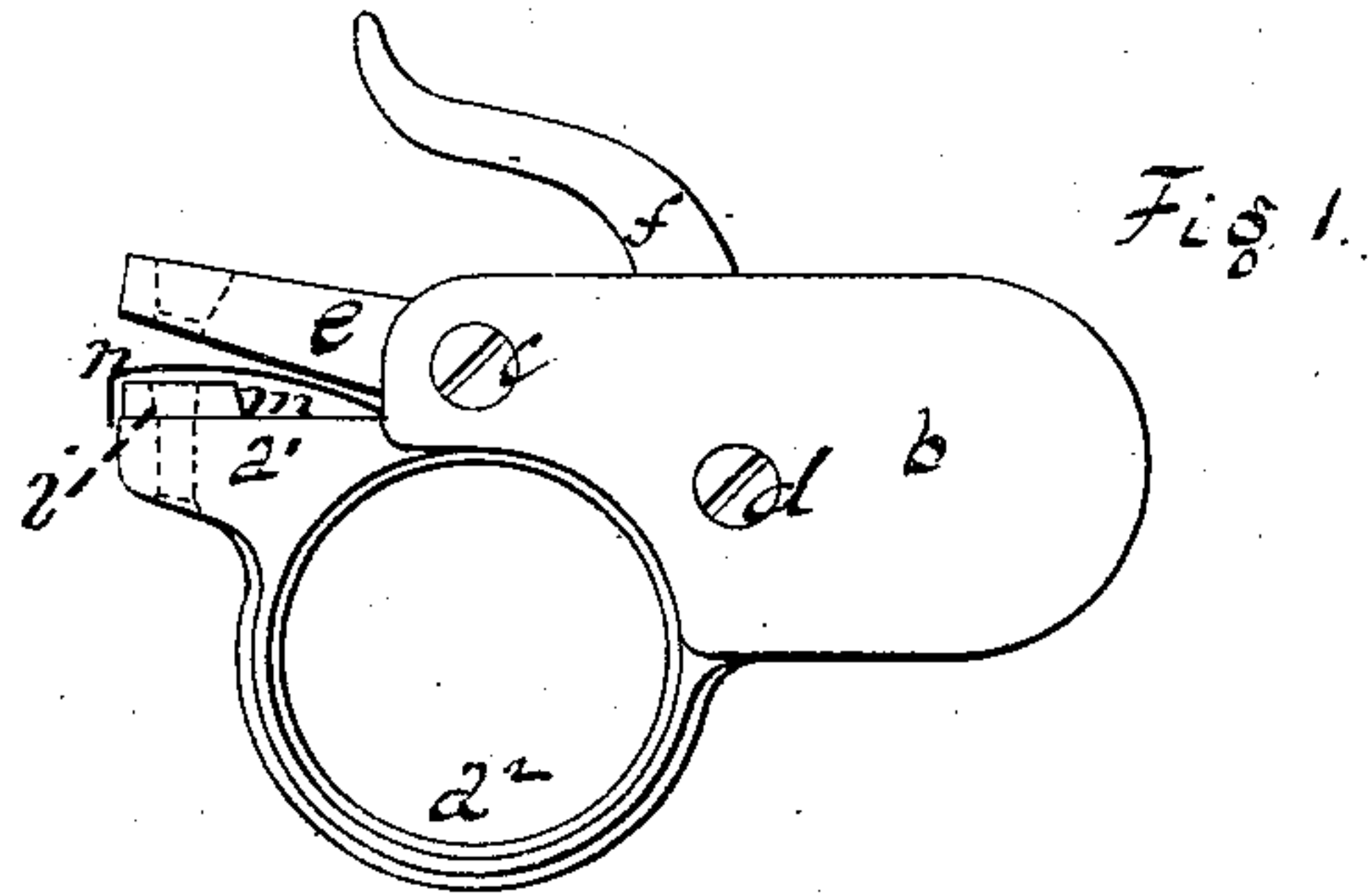


O. T. HUNGERFORD.
Conductors' Punch.

No. 162,071.

Patented April 13, 1875.



WITNESSES.

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UNITED STATES PATENT OFFICE.

OLIVER T. HUNGERFORD, OF NEW HARTFORD, CONNECTICUT.

IMPROVEMENT IN CONDUCTORS' PUNCHES.

Specification forming part of Letters Patent No. **162,071**, dated April 13, 1875; application filed January 8, 1875.

To all whom it may concern:

Be it known that I, OLIVER T. HUNGERFORD, of New Hartford, in the county of Litchfield and State of Connecticut, have invented a Conductor's Punch, of which the following is a specification, reference being had to the accompanying drawings, where—

Figure 1 is a side view of the same. Fig. 2 is a similar side view with the covering-plate removed, so as to show the interior construction. Fig. 3 is a top view of the punch. Fig. 4 is a similar top view with a part broken away. Fig. 5 is a bottom view. Fig. 6 is a detail side view of a modification of the anvil-lever. Fig. 7 is a detail top view of a modification of the anvil-lever.

The device is a punch for the use of railway-conductors and others who have need of similar punches.

The body of the punch is composed of two parts—the case *a*, which mainly contains the operating mechanism, and the punch-base *a*¹. Underneath the body is the ring *a*². These three parts, *a a*¹ *a*², are, by preference, made all in one piece of malleable cast-iron or dropped wrought-iron. The ring *a*² is intended to slip upon the forefinger of a person's hand, leaving the anvil-base *a*¹ pointing outward and the case *a* pointing inward. The ring is thus placed, in a certain though not strict sense, centerwise of the body, enabling me to shorten the body of the device and hang the pivot of the punch-lever nearly over the forefinger. The case *a* has a cover or side cap, *b*, secured to the case by screws *c* and *d*. On the screw *c* is hung the punch-lever *e*, running through a mortise in the tail of the thumb-lever *f*, and borne down upon, so as to keep the punch-jaws open, by the spring *g*. On the screw *d* is hung the thumb-lever *f*.

When the device is held on a person's forefinger the lever *f* is in good position to be pressed down upon by the person's thumb, and this action causes the jaw of the punch-lever to close upon the punch-base *a*¹. This punch-base *a*¹ bears the punch *i*, which pro-

jects into the corresponding punch-seat in the jaw of the thumb-lever when the two jaws come together, and, a card or ticket being held in the path of the punch at such time, a hole is punched in the ticket.

The letter *m* denotes a rubber cushion, and *n* a spring overlying this cushion.

In the modification shown in Figs. 6 and 7 the cushion and spring *m n* are dispensed with, and a slit, *o*, is shown in the jaw of the punch-lever for the insertion of the ticket to be punched.

With reference to the second clause of the following claim I have to say that I do not intend to cover and claim all combinations of two levers with a punch-base, but only a combination where the construction and arrangement are such that the power end of the thumb-lever overhangs the punch-base, and in the act of punching is moved toward the punch-base, and by the same movement moves the punch-bearing end of the punch-lever toward the punch-base, such an arrangement of the two levers being essential to attain the compactness, and at the same time retain the power, of my device.

I claim as my invention—

1. In an apparatus for punching tickets, cards, &c., the body or case *a*, of one piece, provided with a punch-base, *a*¹, and ring *a*², set underneath and centrally of the body, all substantially as and for the purpose described.

2. The combination of the thumb-lever *f*, its power end overhanging the punch-base, the punch-lever *e*, and the punch-base *a*¹, all substantially as set forth and described.

3. The combination of the body *a*, provided with the punch-base *a*¹ and ring *a*², set centrally underneath the side cap *b*, and the levers *e f*, all constructed and arranged substantially as and for the purpose described.

OLIVER T. HUNGERFORD.

Witnesses:

B. G. LOOMIS,
E. D. CURTIS.