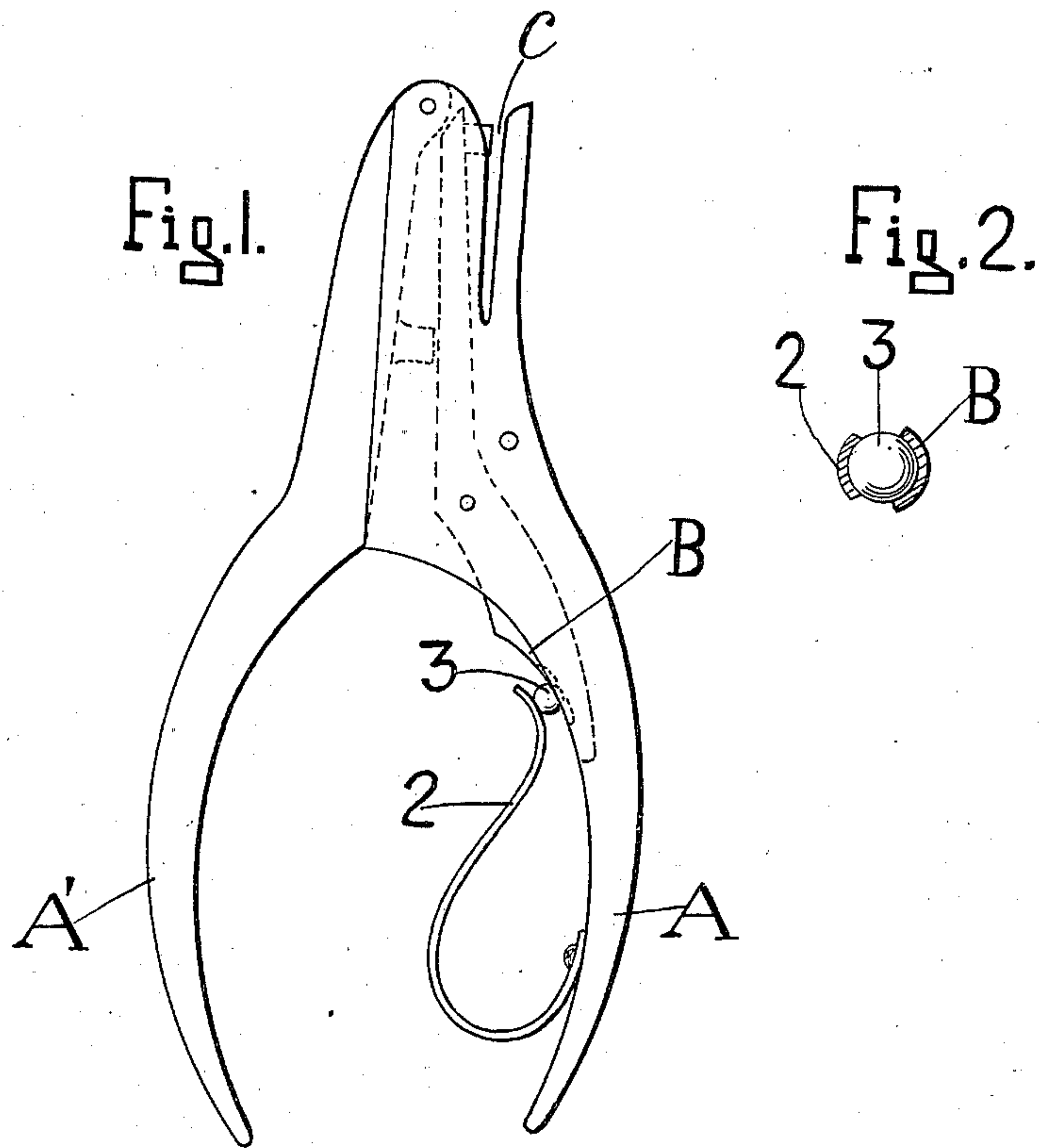


No. 726,597.

PATENTED APR. 28, 1903.

H. C. WATSON.
TICKET PUNCH ATTACHMENT.
APPLICATION FILED FEB. 2, 1903.

NO MODEL.



WITNESSES:

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HORACE C. WATSON, OF OAKLAND, CALIFORNIA.

TICKET-PUNCH ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 726,597, dated April 28, 1903.

Application filed February 2, 1903. Serial No. 141,583. (No model.)

To all whom it may concern:

Be it known that I, HORACE C. WATSON, a citizen of the United States, residing in Oakland, county of Alameda, State of California, have invented an Improvement in Ticket-Punch Attachments; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an attachment for ticket and like punches and for similar devices having the handles fulcrumed and closable by pressure and provided with a spring by which they are opened when released.

It consists in the combination, with the fulcrumed handles, the movable punch-actuating portion, and the returning-spring, of an antifrictional bearing between the spring and the point upon which it rests.

Referring to the accompanying drawings, Figure 1 is a front elevation of my invention. Fig. 2 shows how the ball is kept in place.

A ticket-punch consists of the handles A A, and in the present case a fulcrumed lever portion B, having the punching part at the outer end, and the particular style of punch here illustrated has a slit C, into which the ticket is inserted, and the handles being closed together the punch is forced through that portion of the ticket inclosed within the slot C, making any style of a hole corresponding with the shape of the punch.

In order to return the parts to their normal position, a spring 2 is fixed to one of the handles, and this spring ordinarily presses upon the end of the lever B, so that when the handles are released the lever is allowed to tilt and raise the punch into the upper part of the jaw.

In the movement of closing and opening the handles A the end of the spring ordinarily slides back and forward upon the rear end of the lever-arm B, and with constant use this soon wears and produces so much rubbing friction that the springs are frequently broken and the punches have to be constantly sent to the repair-shop.

It is the object of my invention to overcome this difficulty, and I effect it by introducing a ball or roller, as at 3, between the surfaces of the lever B and the spring 2, so that the opening and closing of the handles causes the antifrictional part 3 to roll back and forward

between the two, thus relieving the friction and consequent damage.

As here shown, the upper surface of the end of the lever B is made slightly concaved, and the lower surface of the coincident end of the spring 2 is correspondingly concaved, so that the steel ball 3 may be placed between the two, and experience has shown that no fastening or attachment is necessary, as the ball will never leave the channel in which it is placed.

It will be manifest that a roller might be used in place of the ball, but without journals, as such roller is liable to twist and not to run freely, while the ball having universal movement will never bind or need any attention.

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

1. The combination with a ticket or like punch and the spring by which the parts are returned to a normal position of a rolling antifrictional device located between the contiguous moving parts of the spring and its contacting surface.

2. The combination with a pair of pivoted handles adapted to be closed by pressure, and a leaf-spring by which said handles are separated of a ball located between the contacting surfaces of the spring and handle.

3. The combination in a ticket-punch of pivoted handles a punch-carrying lever fulcrumed within said handles, a curved single-leaf spring fixed to one of the handles adapted to press upon the end of the lever and a ball turnable between the contiguous surfaces of the spring and lever.

4. The combination in a ticket or like punch of fulcrumed handles, a punch-carrying lever pivoted between said handles, a curved single-leaf spring having one end fixed to one of the handles and the opposite end contiguous to the rear end of the punch-lever, channels made in the adjacent surfaces of the lever and the spring, and a ball resting and revolvable in said channels.

In witness whereof I have hereunto set my hand.

HORACE C. WATSON.

Witnesses:

L. L. SALSURY,
F. JOCHEM.