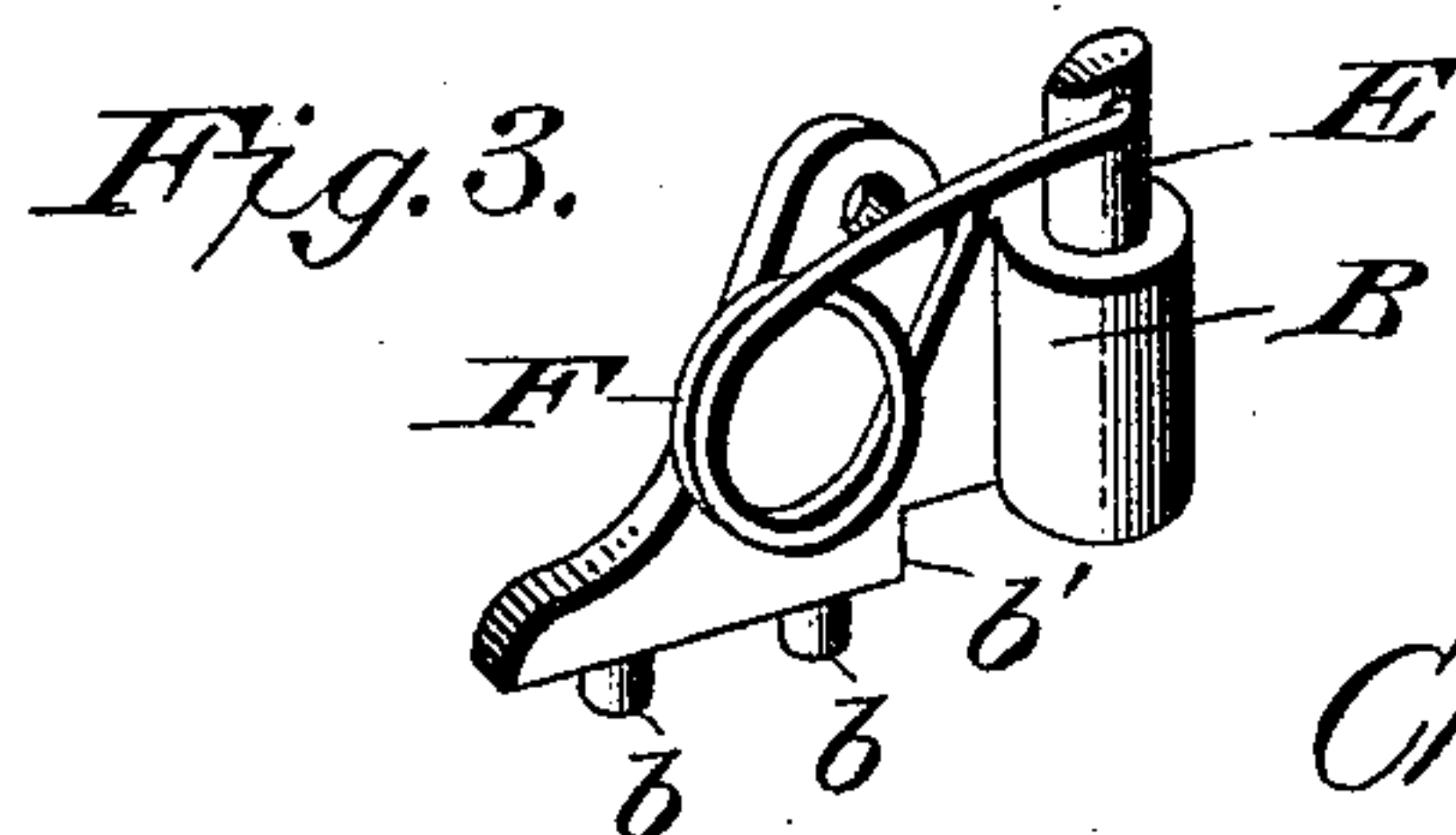
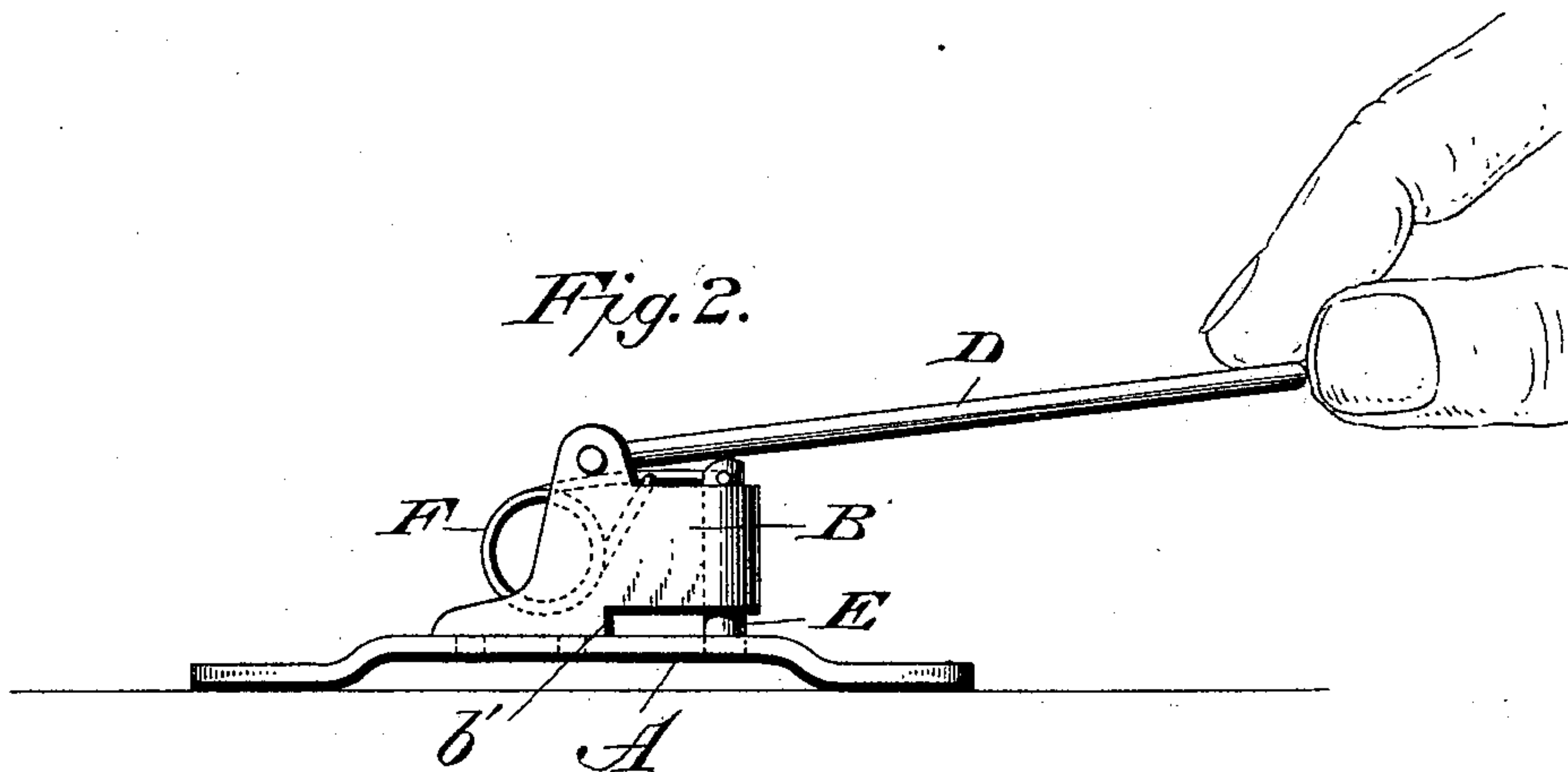
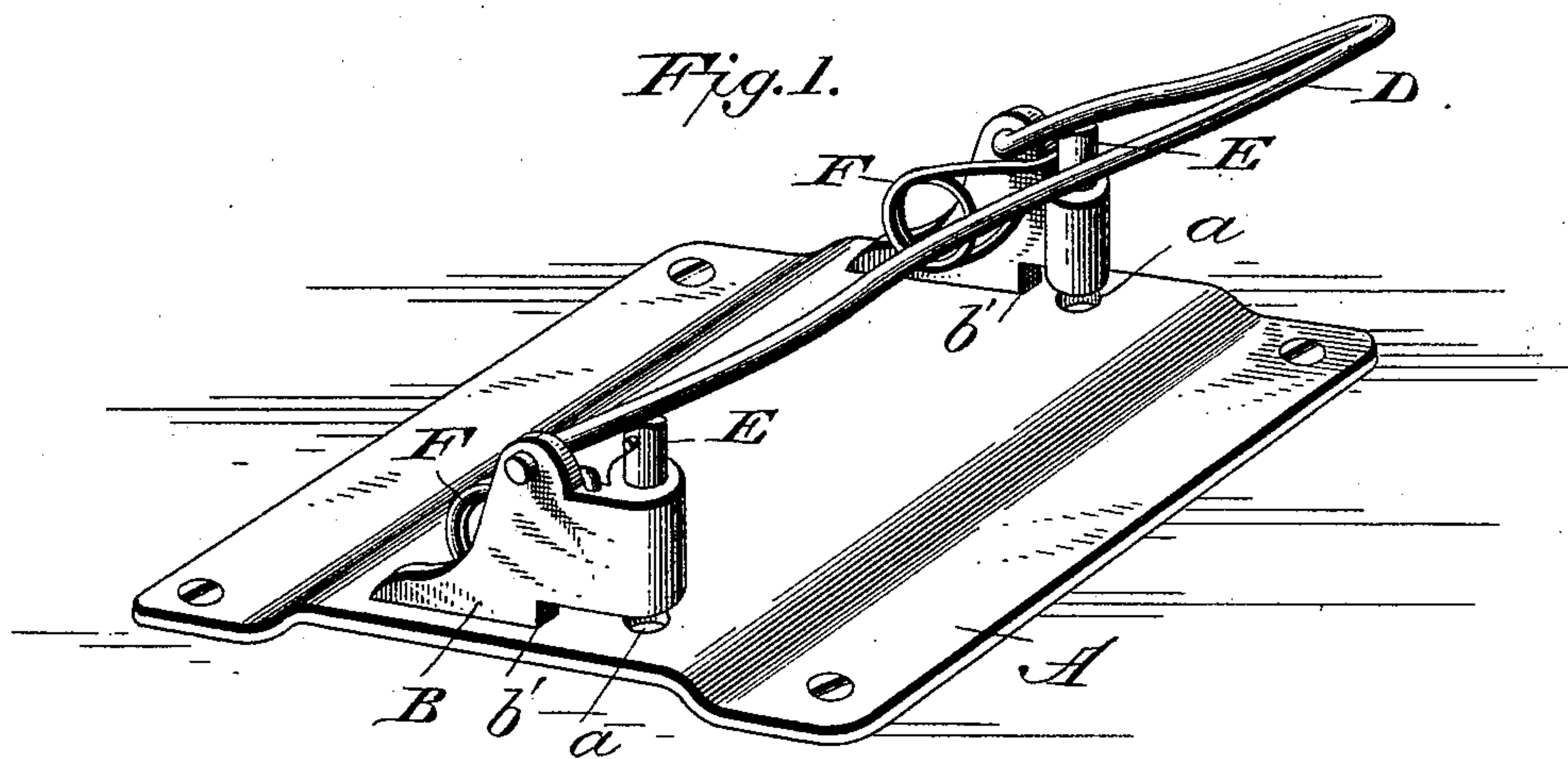


(No Model.)

C. D. THEN.
PAPER PUNCHING DEVICE.

No. 500,442.

Patented June 27, 1893.



WITNESSES
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UNITED STATES PATENT OFFICE.

CHRISTIAN D. THEN, OF ROCHESTER, NEW YORK.

PAPER-PUNCHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 500,442, dated June 27, 1893.

Application filed March 30, 1893. Serial No. 468,367. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN D. THEN, a citizen of the United States of America, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Paper-Punching Devices; 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 use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a cheap, simple and effective paper punching machine, which may be used for perforating paper prior to filing the same on a bill or letter file, or for the purpose of receiving tape, eyelets, or other paper fastening devices.

The invention consists in a perforator having an arched bed-plate to which are attached supports apertured to receive the punches and a spring bail which serves as a lever, the punches being held normally raised by means of springs which are attached thereto and to the supports; and the invention further consists in the construction and combination of the parts, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of a paper punching machine constructed in accordance with my invention. Fig. 2 is a side elevation showing the punches lowered. Fig. 3 is a detail perspective view of one of the supports for the punches detached.

A designates the bed-plate, which is adapted to be attached to a suitable support or board, which may carry a bill-file. This bed-plate consists of a single plate of metal which is centrally raised or arched and especially where the apertures *a* are formed through which the punches for perforating the paper pass.

B B designate the supports for the punches, which are attached to the bed-plate by means of lugs or studs *b* formed thereon, which are passed through perforations in the bed-plate and upset or riveted. The forward end of each support is cut away to provide a shoulder *b'*, which serves as a stop for the paper to be perforated, and above the shoulders the supports are extended upward and perforated to receive the bent ends of the lever or spring bail D. The forward ends of the supports are enlarged and apertured vertically to receive the sliding punches E, which are located immediately above the apertures *a* in the bed-plate so that when said punches are depressed by the lever or bail D, which is brought to bear upon the upper ends of the same, said punches will pass into the apertures. The punches are held normally raised by the springs F, the ends of which are bent to engage with apertures in the supports and in the punches near the upper ends thereof.

In operation, when the lever or spring bail is swung to bear upon the upper ends of the punches and is further depressed the punches will be forced through the paper and into the perforations *a* in the bed-plate, carrying the cores cut from the paper with them. When the bed-plate is attached to a board apertures are cut in said board beneath the perforations *a* through which the cores can pass.

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

1. A paper punching machine consisting of an arched bed-plate having supports with vertical and horizontal apertures, punches located in the vertical apertures and provided with springs for elevating the same, the horizontal aperture receiving the ends of a lever, substantially as shown, and for the purpose set forth.

2. A perforator consisting of a bed-plate with perforations, supports secured adjacent to said perforations, said supports being apertured to receive the punches and a lever or bail for operating the same, springs bent at their ends to engage with the supports and with the punches, substantially as shown, and for the purpose set forth.

3. A perforator consisting of a bed-plate with perforations into which the punches pass, supports secured to said bed-plate and provided with stops and vertical and horizontal apertures, punches located in the vertical apertures of the supports, springs attached to the supports and to the punches below the upper ends of the same, together with a lever

or bail having bent ends for engagement with the horizontal apertures of the supports, said lever or bail being adapted to engage with the punches, substantially as shown, and for the purpose set forth.

4. A perforator having a bed-plate with apertures through which the punches pass, supports secured to said bed-plate, said supports having shoulders and projecting lugs or studs for securing the same to the bed-plate, springs for holding the punches normally elevated, and a swinging bail or lever attached to the supports, said bail or lever being adapted to be turned for engagement with the upper ends of the punches, substantially as shown, and for the purpose set forth.

5. In a paper punching device, a bed plate A having a raised or arched central portion with apertures, supports B B attached to the bed-plate and provided with vertical and hori-

zontal apertures, a spring bail or lever D having outwardly bent ends which enter the horizontal apertures in the supports D D and are retained therein by spring pressure incident to the construction of said lever, punches E E located partially within the vertical apertures in the supports D D, said supports having transverse openings adjacent to their upper ends and springs F F carried by the supports and bent for engagement with the punches, the parts being combined and organized substantially as shown, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHRISTIAN D. THEN.

Witnesses:

WILLIAM T. SIMPSON,
EDWARD G. WULFF.