

No. 750,603.

PATENTED JAN. 26, 1904.

S. CLOUTIER.
FLY CLOSER FOR SHOE UPPERS.

APPLICATION FILED APR. 20, 1903.

NO MODEL.

Fig. 1.

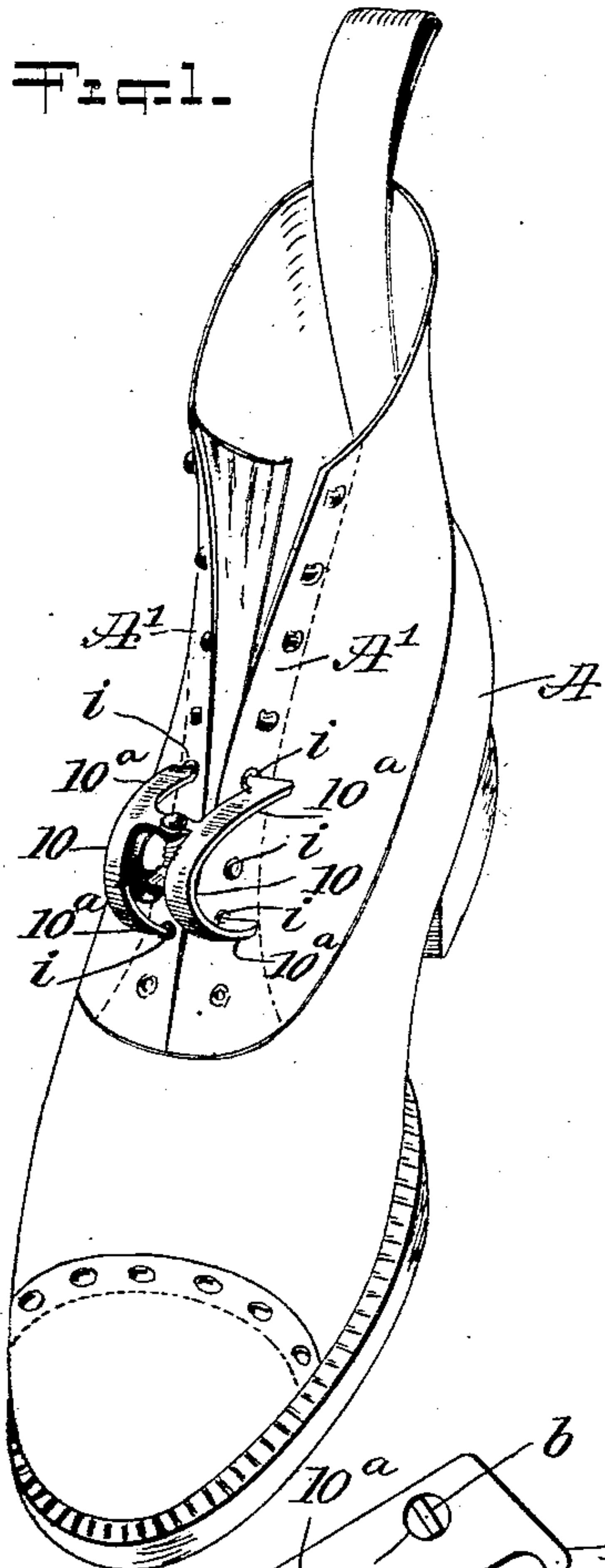


Fig. 2.

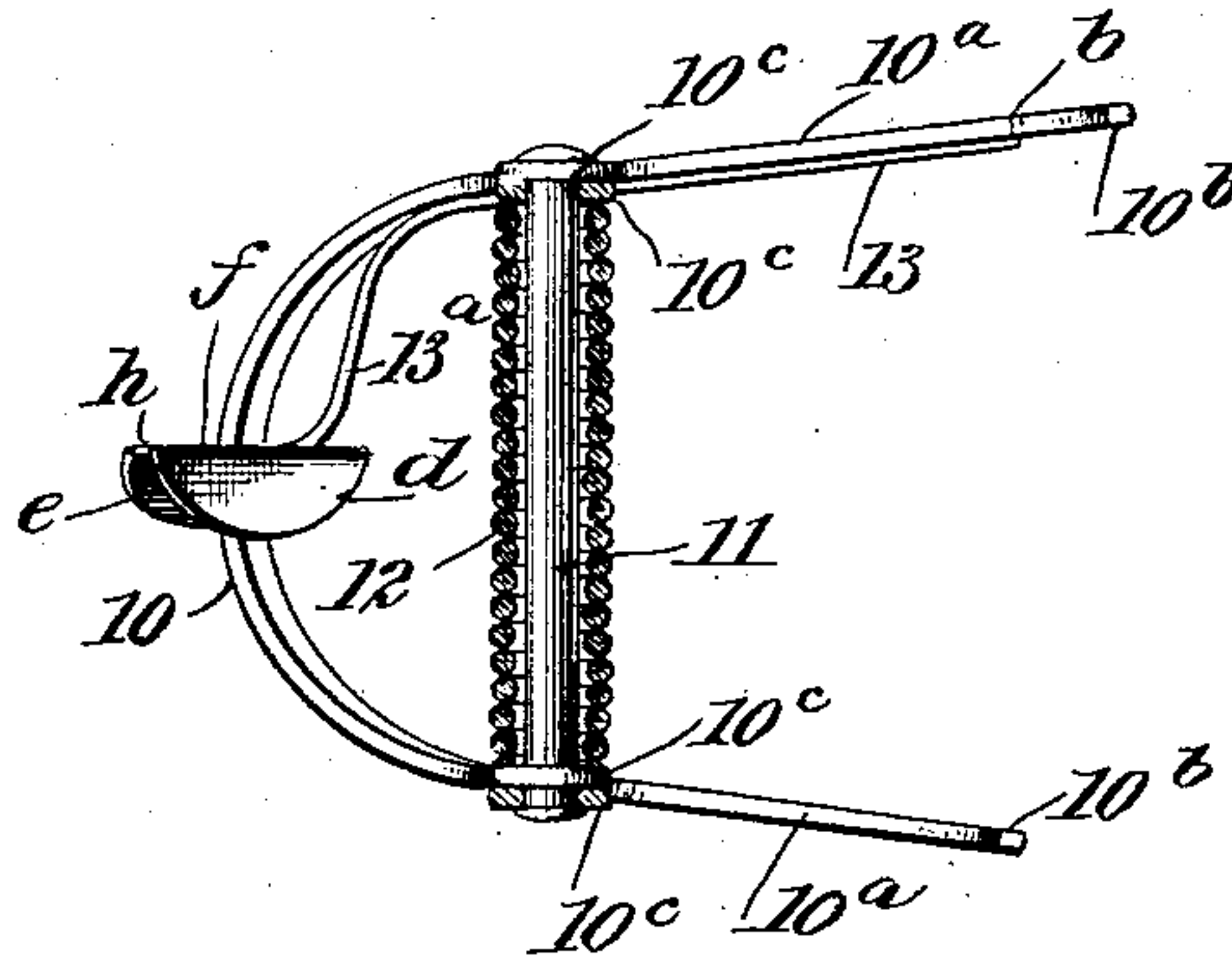


Fig. 3.

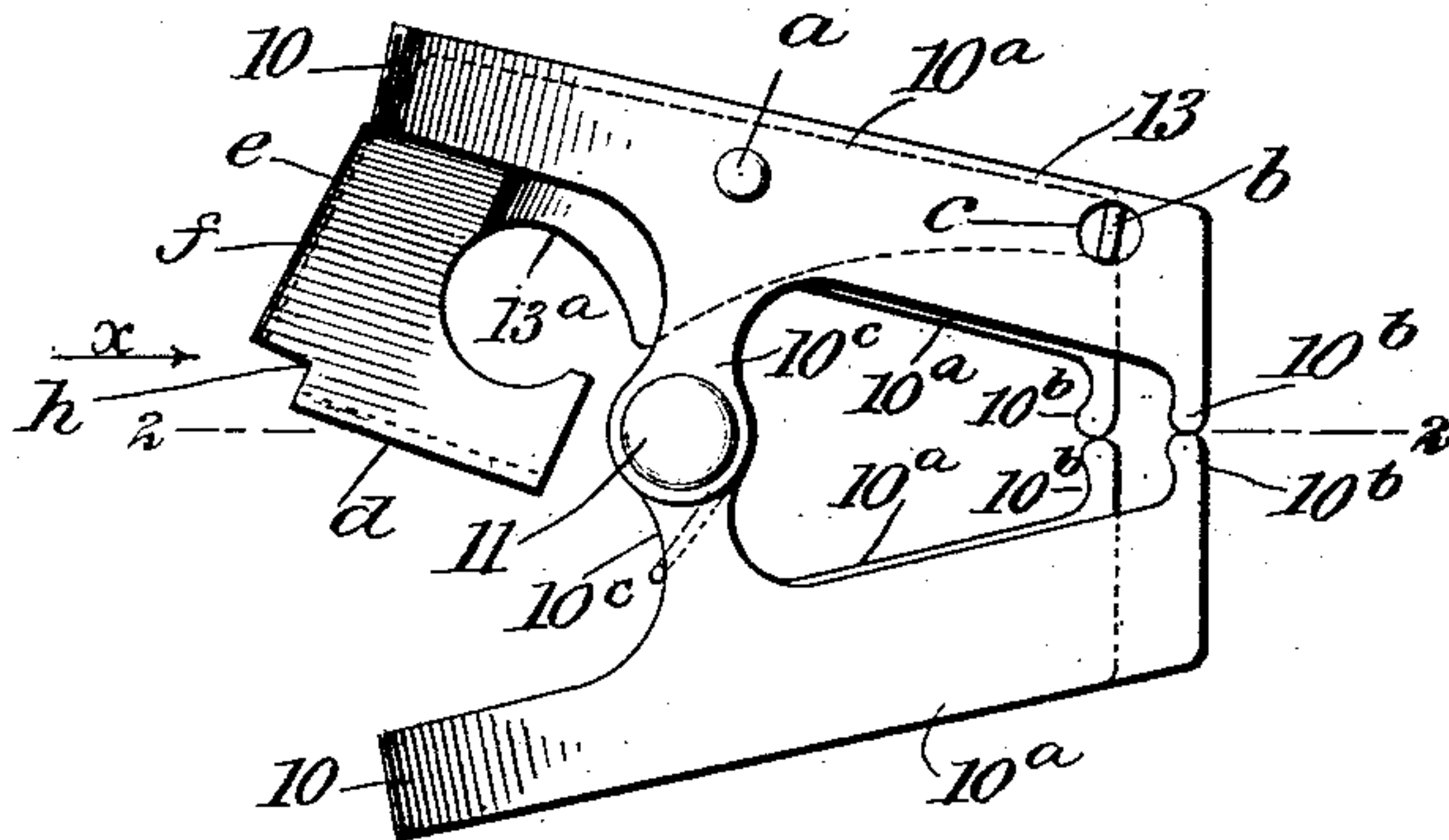


Fig. 4.

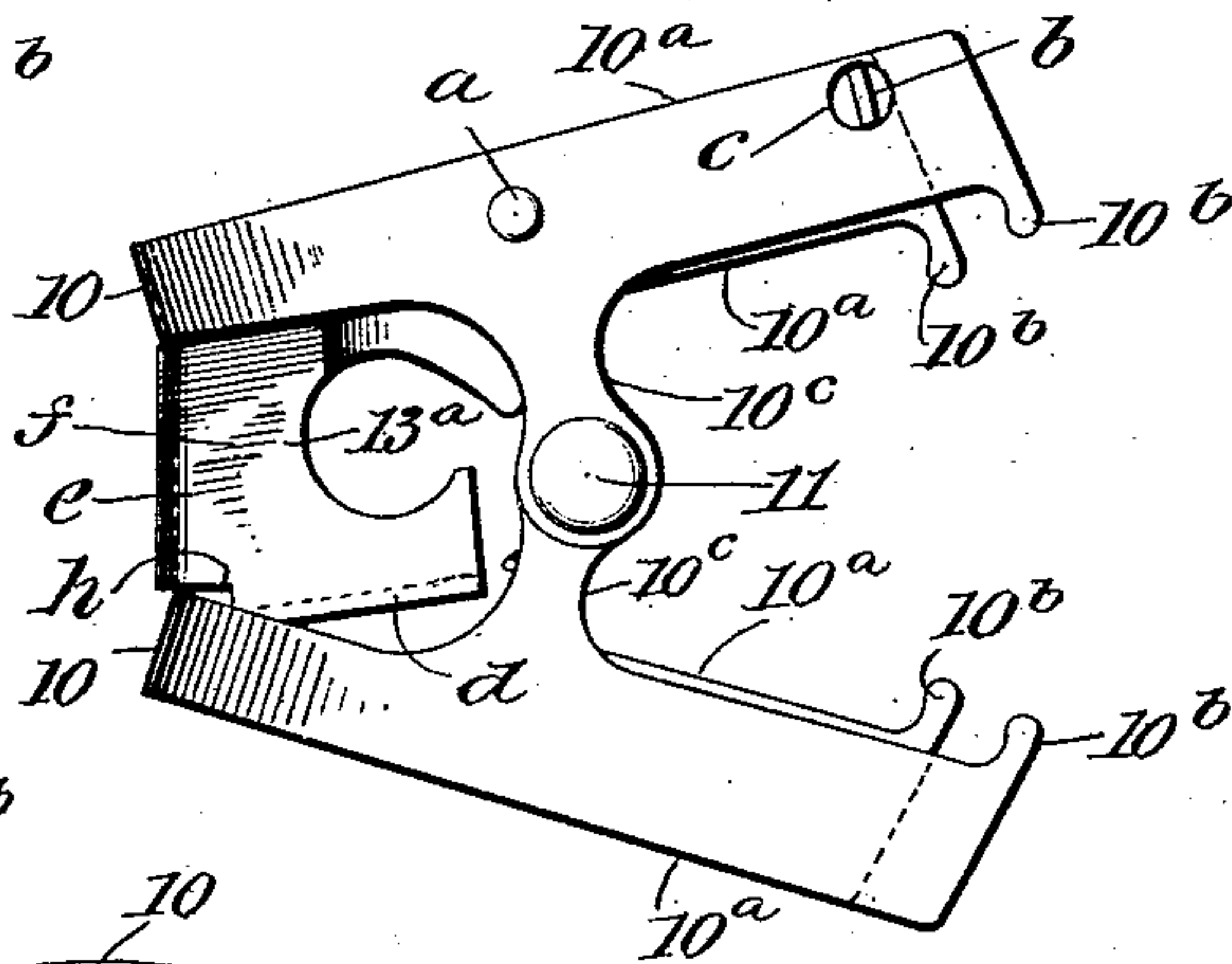
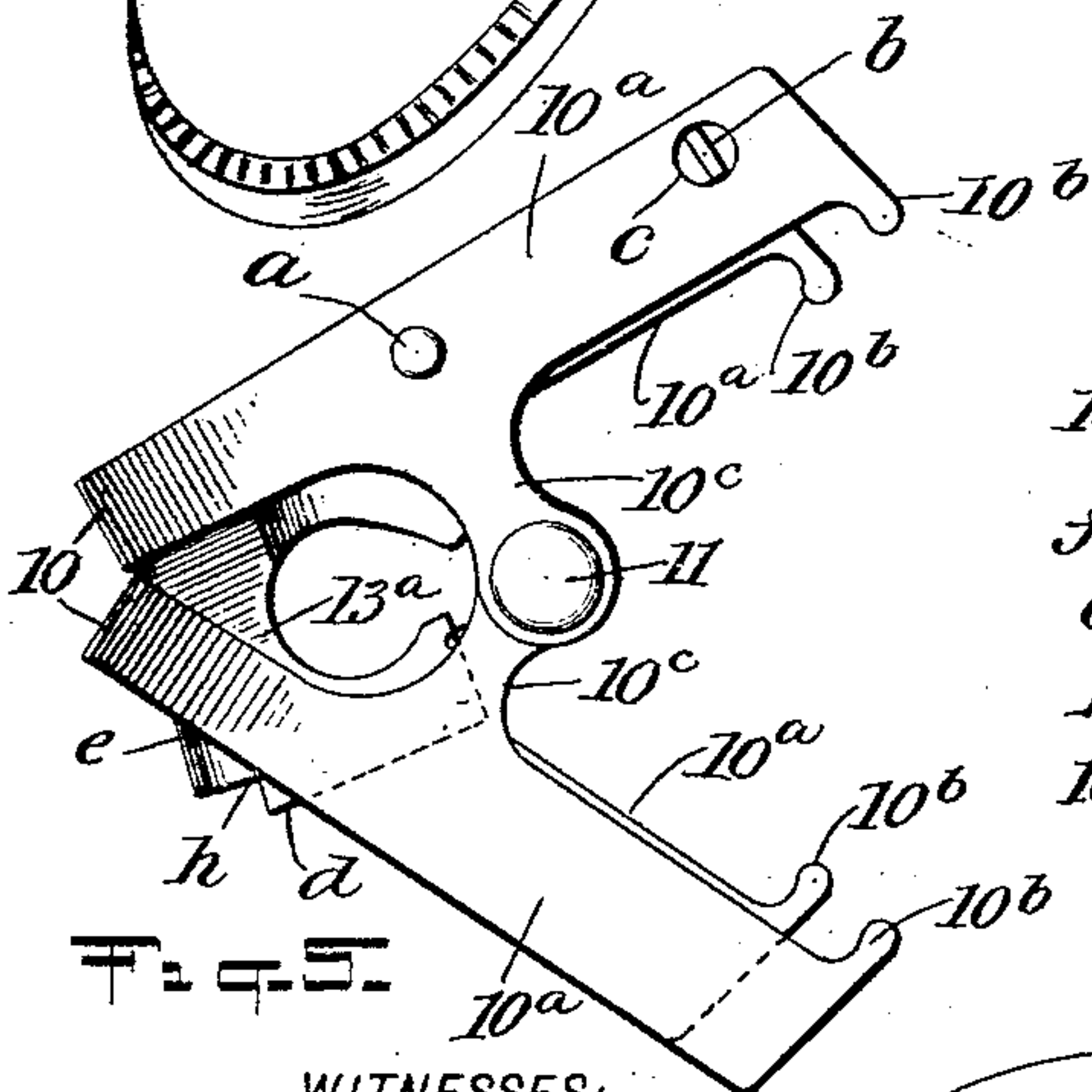
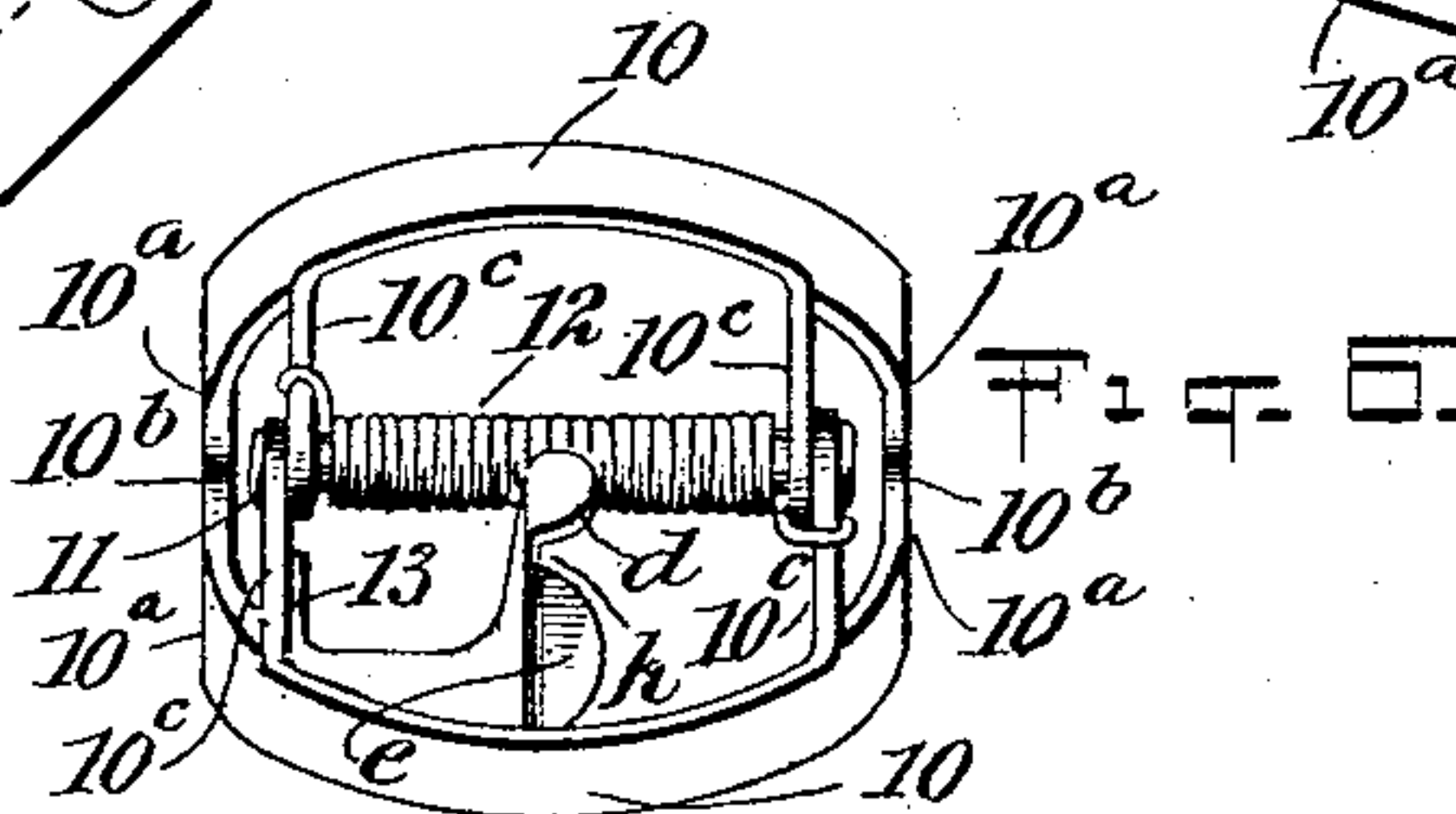


Fig. 5.



WITNESSES:

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SAMUEL CLOUTIER, OF LEWISTON, MAINE.

FLY-CLOSER FOR SHOE-UPPERS.

SPECIFICATION forming part of Letters Patent No. 750,603, dated January 26, 1904.

Application filed April 20, 1903. Serial No. 153,578. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL CLOUTIER, a citizen of the United States, and a resident of Lewiston, in the county of Androscoggin and State of Maine, have invented a new and Improved Fly-Closer for Shoe-Uppers, of which the following is a full, clear, and exact description.

In the manufacture of shoes the uppers of which are closed at their "flies" with lacings and are provided with spaced perforations along the edges of the flies for reception of the lacings it is necessary to enable the proper mounting of the uppers of the shoes upon the lasts that means be provided for the temporary closure of the flies, so that the uppers may be drawn into close contact with the lasts for the attachment of the shoe-soles thereto.

The object of this invention is to provide a closer or holder of novel construction for the convenient and reliable closure of the fly for a shoe-upper which will without injury thereto be adapted for a removable engagement with the perforations at the edges of the fly in the vamp or shoe-upper and hold said edges from spreading apart while the shoe is in process of manufacture.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improved fly-closer applied upon a shoe-upper. Fig. 2 is an enlarged partly-sectional side view of the device substantially on the line 2 2 in Fig. 3. Fig. 3 is a plan view of the closer device, showing the clamping members in closed adjustment. Fig. 4 is a plan view of the same, partly opened. Fig. 5 is a plan view showing the clamping-links opened fully, and Fig. 6 is an end view seen in direction of arrow *x* in Fig. 3.

The improved fly-closer for shoes, as illustrated in the drawings, comprises the following details:

Two similar clamping-sections are provided, each formed of a strip of resilient plate metal that is bent flatwise to give it an arched form,

as shown at 10 in the drawings, and from the arch two limbs 10^a extend of equal length and width. The limbs 10^a on each clamping-section diverge slightly from the arched portion 10 toward their ends, and upon said ends similar toes 10^b are formed that project from like edges thereof.

Upon the edges of the limbs 10^a on each clamping-section that the toes 10^b project from and at a suitable point between the toes and arch 10 an arm 10^c extends from each of said edges, and at their free ends the arms on one clamping-section lap upon the similar arms on the other clamping-section. The edges of the lapped end portions of the arms 10^c are preferably rendered circular, and at the centers of said curvatures the arms are perforated, said perforations of equal diameter receiving the end portions of a pivot-shaft 11, that is loosely secured in engagement with the clamping-sections by riveted enlargements of the end portion thereof, which project slightly beyond the exterior of the outer arms 10^c.

Upon the shaft 11 a coiled spring 12 is mounted, which extends from the inner surface of one limb on a clamping-section to the other limb thereon, and the ends of the spring-coil are respectively secured in engagement with an arm 10^c on each clamping-section, the stress of the spring serving to close the two pairs of limbs, so as to impinge the toes 10^b of one pair of limbs upon the opposed toes of the other pair of limbs, as is clearly represented in Figs. 3 and 6.

Upon one limb 10^a of a clamping-section a guard-spring is secured and serves to prevent an accidental release of the closer device when it is engaged with the perforated flaps of the vent in a shoe-upper. The guard-spring consists of a strip of resilient sheet metal formed to produce an elongated flat member 13 at one end thereof, which is secured by the rivet *a* upon the inner surface of one limb 10^a and also is held in proper position on said limb by the formation of the toe *b* on the end of the member 13, that projects laterally therefrom and through the perforation *c* in the engaged limb 10^a. At a suitable distance from the rivet *a* the opposite end portion of the guard-spring is curved outward, and upon the end of this curved portion 13^a the abutment-head

f is integrally formed. The head f is formed with two flanges d e , that are bent at or near a right angle to the head-wall f they are portions of and in planes substantially at a right angle to each other. The guard-head is positioned below and near to the crown of the arch 10 on the clamping-section the guard-spring is secured upon, and, as shown, the flange d is projected at one side of the head-wall f toward the spring-coil 12, and the other flange, e , nearly contacts at one end of the same with the arch 10, above mentioned, and inclines slightly upward and away from said arch, as is clearly shown in Fig. 3, this being the normal position of the flanges when the tension of the spring 12 is permitted to close the clamping-sections and cause the toes 10^b to contact in pairs with each other. A notch h is formed at the corner of the head-wall f between the adjacent ends of the angularly-disposed flanges d e .

It will be seen that the rocking movement of the two clamping-sections of the fly-closing device that may be effected by a compression of the same at their arched portions 10 will cause said portions to approach each other and correspondingly spread apart the opposed toes on the limbs 10^a , that were held in contact by tension of the spring 12. The length of the flange e , as defined by the notch h , limits the degree of compression, and the divergence of the toes 10^b on pairs of the limbs 10^a when the guard-spring is in normal adjustment, as it will be noticed that the upward inclination of the flange e toward the notch disposes the end of the flange at the notch h slightly above the edge of the arch 10 on the clamping-section that is rocked toward this end of said flange, and therefore forms an abutment which arrests the rocking movement.

In illustrating the application of the improved closer device, A' represents the flap portions of the shoe A , that is of the laced style, said flaps having spaced eyelet-holes i , formed along and near the edges of the flaps that afford the fly for the shoe. To apply the device, if it is necessary to spread apart the toes 10^b as far as possible this may be readily effected by pressing upon the flange e , which will depress the head of the guard-spring, and thus permit the arches 10 to be brought into contact, the member 10 nearest to the notch h passing above the flange e , as indicated in Fig. 5. This adjustment may be graded in extent as to spread of the toes on the limbs 10^a , so that said toes may be entered into appropriate eyelet-holes i , whereupon the release of pressure on the arched members of the clamping-sections will permit the spring 12 by its stress to draw the fly-flaps A' together.

When the holder or closer device is engaged with the shoe-flaps, the distance between the eyelet-holes that are engaged by the toes 10^b should be such as will permit the flange e to

nearly contact at its ends with the opposed edges of the members 10, which will prevent an accidental rocking movement of the limbs 10^a outwardly for release of their toes 10^b from the flaps A' .

It will be seen that by employment of a proper number of the fly-closers, depending on the length of the vent, the edges of the shoe-flaps A' may be held close together to enable the proper mounting of the shoe-upper upon a last for an attachment of the welt and sole of the shoe thereto. When the improved closers are to be removed, this may be readily effected by downward pressure applied to the guard-spring on each closer device and the simultaneous rocking movement of the limbs 10^a , so as to spread apart opposed limbs and withdraw the toes 10^b from the eyelet-holes i , this adjustment appearing in Fig. 5 of the drawings.

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

1. A fly-closer for shoes, comprising two substantially U-shaped clamping-sections, limbs thereon, and lateral toes on said limbs, arms on the clamping-sections lapped together, a pivot-shaft engaged at its ends in perforations in the lapped arms, and a spring mounted upon the shaft having ends thereof respectively engaged with a limb on each clamping-section.

2. A fly-closer for shoes, comprising two substantially U-shaped clamping-sections, each having two slightly-diverging limbs, toes on like edges of the limbs on each clamping-section, arms projected laterally from side edges of the limbs on each clamping-section, the arms on one section lapping upon the arms on the other clamping-section all the arms being perforated in alinement, a pivot-shaft held by its ends in the perforations, and a coiled spring mounted upon the shaft, the ends of the spring respectively having engagement with a limb on a respective clamping-section.

3. A fly-closer for shoes, comprising two substantially U-shaped clamping-sections each having two flat limbs, and a lateral toe on a like edge of each limb at its end, arms extended from said edges one on each limb at an equal distance from the toes, the arms on one clamping-section lapping upon the arms of the other clamping-section, the arms being perforated in alinement, a pivot-shaft engaged at its ends in the perforations of the arms, a coiled spring mounted upon the shaft and having its ends engaged respectively with a limb on a respective clamping-section, and a guard-spring carried by one limb of a clamping-section, said guard-spring being adapted to control the extent of divergence given to the limbs of the clamping-sections at their toes.

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Witnesses:

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