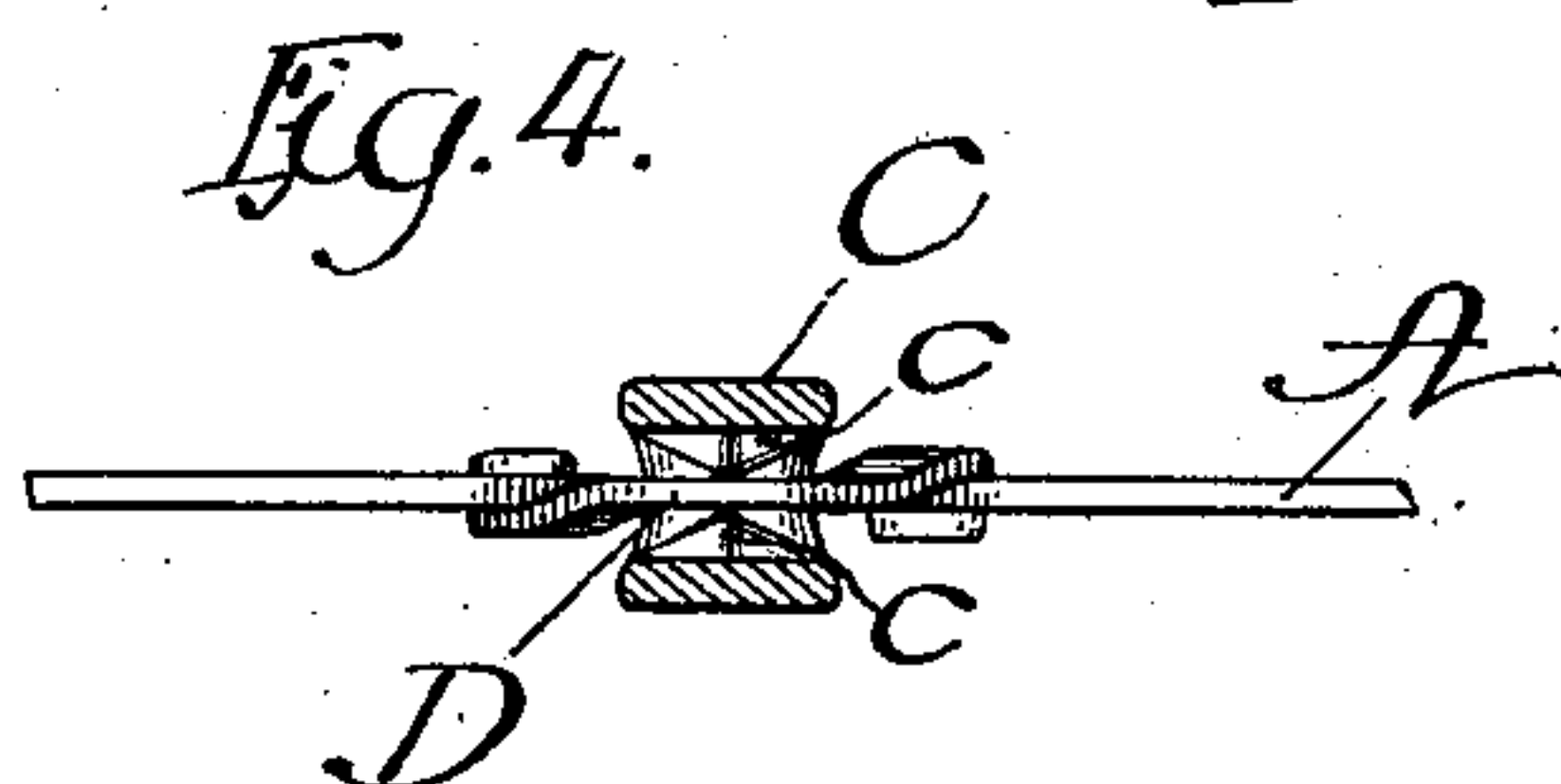
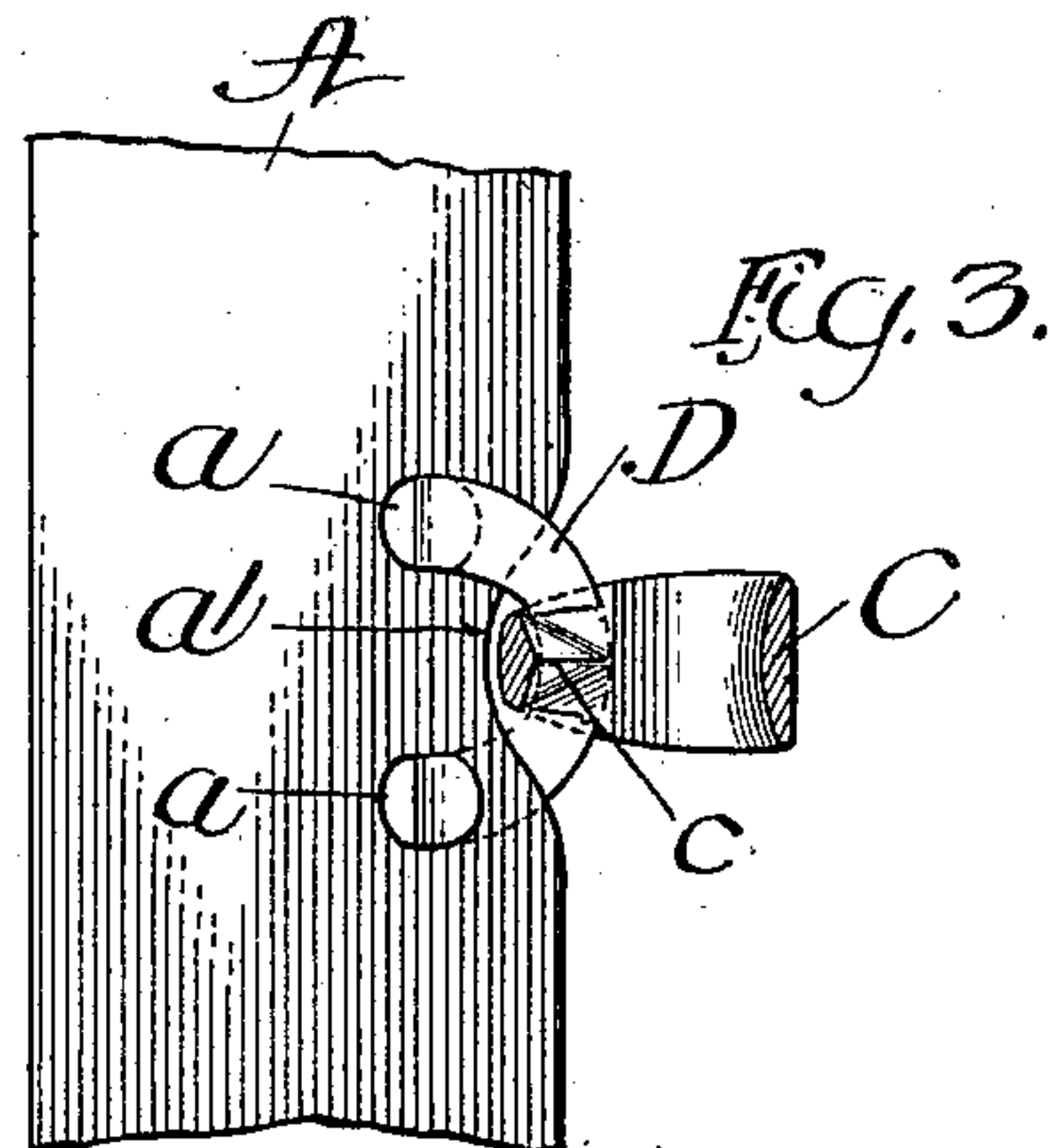
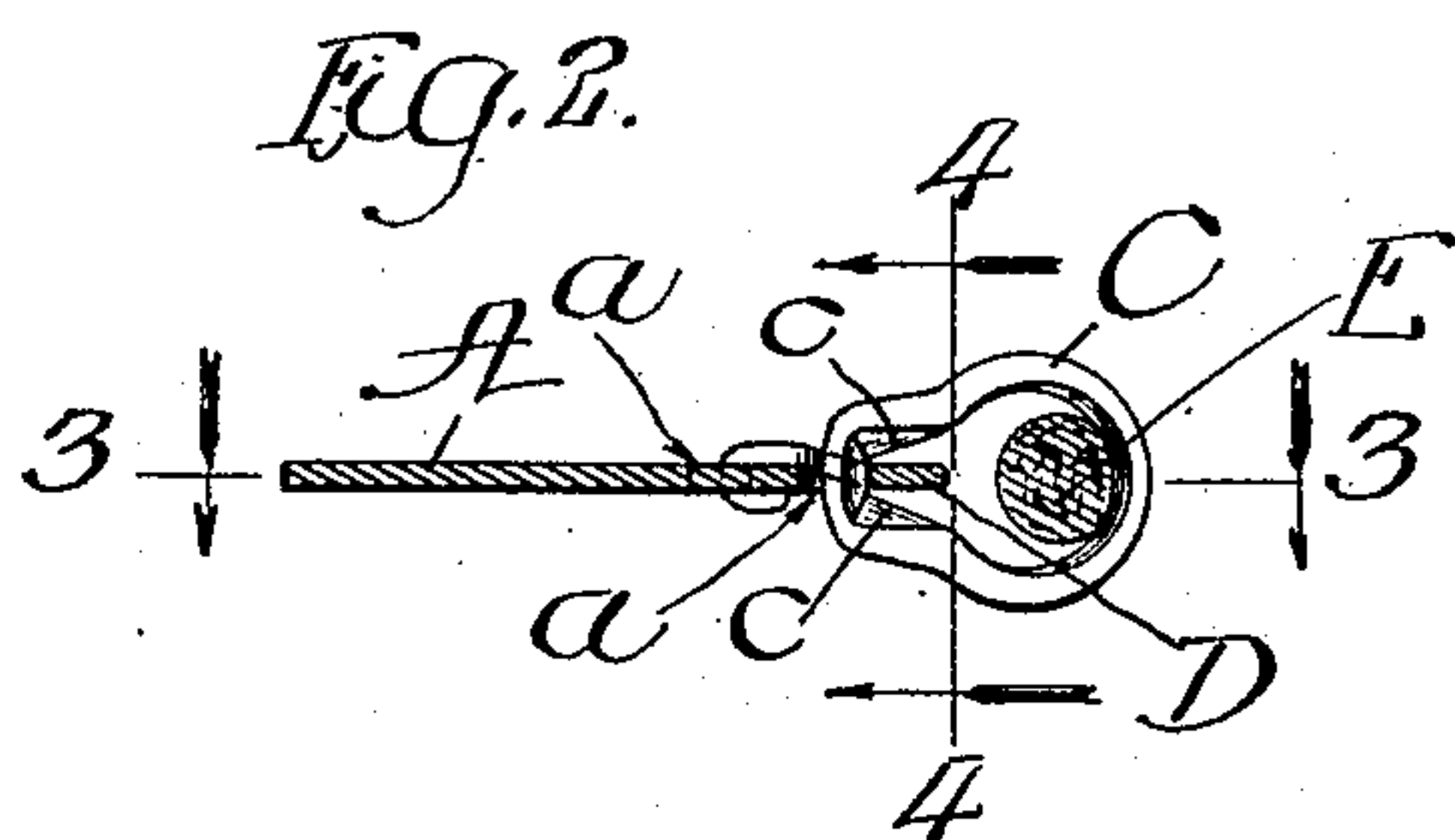
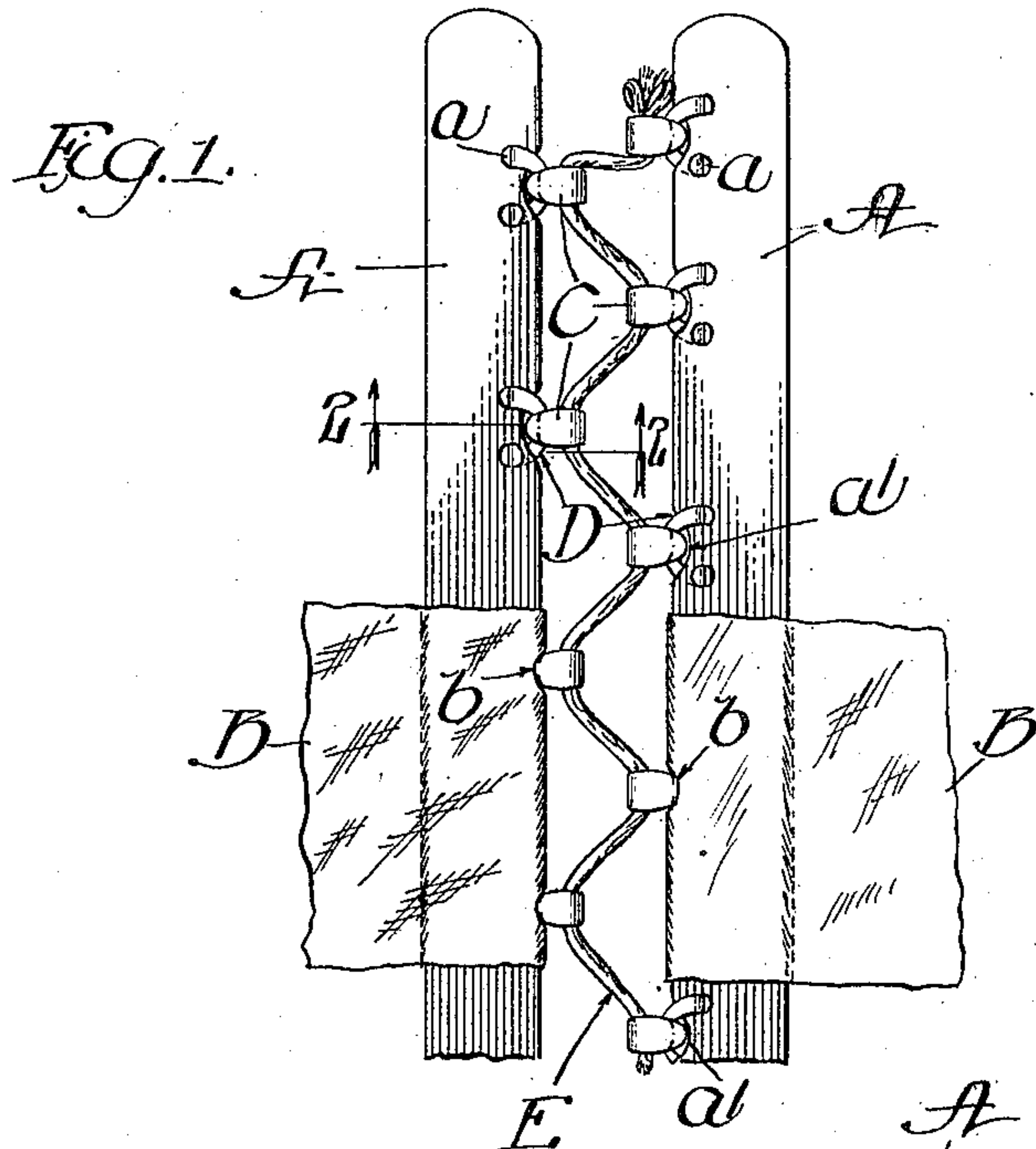


M. B. GARDNER.
CORSET LACING DEVICE.
APPLICATION FILED MAR. 24, 1908.

914,406.

Patented Mar. 9, 1909.



Witnesses:
P. H. Alfede
J. R. Wilkins

Inventor:
Marshall B. Gardner
by Poole + Brown
Attys.

UNITED STATES PATENT OFFICE.

MARSHALL B. GARDNER, OF AURORA, ILLINOIS, ASSIGNOR TO THE INTERNATIONAL CORSET CO., OF AURORA, ILLINOIS, A CORPORATION OF ILLINOIS.

CORSET-LACING DEVICE.

No. 914,406.

Specification of Letters Patent.

Patented March 9, 1909.

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To all whom it may concern:

Be it known that I, MARSHALL B. GARDNER, a citizen of the United States, and a resident of Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Corset-Lacing Devices; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to corset lacing devices and more especially to a metal corset lacing eye which is directly connected with a metal stay strip or steel inserted in the rear margin of the corset.

The invention consists in the matters hereinafter described and pointed out in the appended claims.

As illustrated in the accompanying drawings—Figure 1 is a face view of two corset steels provided with metal lacing eyes and parts of the fabric of the two sections of the corset with which said steels are connected. Fig. 2 is a detail section on an enlarged scale, taken on line 2—2 of Fig. 1. Fig. 3 is a sectional view taken upon line 3—3 of Fig. 2. Fig. 4 is a detail section taken upon line 4—4 of Fig. 2.

As shown in said drawings, A A indicate the stay strips or steels which are inserted in pockets formed in the rear margins of the two halves of the corset, parts of the fabric constituting the body of the corset being indicated by B B in said Fig. 1.

C, C indicate metal lacing loops or eyes which are loosely or flexibly connected with the steels A, A by U-shaped connecting members D D which are thin and flat and preferably made of sheet metal.

E indicates a portion of one of the lacing strings which passes through or is engaged with the lacing loops C, C. Said lacing loops C, C are arranged with apertures therein extending vertically or in a direction lengthwise of the steels, so that the lacing string E, which extends alternately through the lacing loops on the two steels, has all of its parts substantially in the plane of the meeting margins of the corset sections. The several loops C, C are, moreover, loosely connected with the steels through the medium of the connecting members D, D in a manner permitting the loops to move or swing

both laterally and endwise with respect to the steels and to thereby adjust themselves to relative shifting movements of the steels and to varying positions of the same with respect to each other.

Now referring to the details of construction illustrated, the lacing loops and means for connecting the same with the steels, each loop and its connecting member D are made as follows: As clearly seen in Figs. 2, 3, and 4, each loop consists of a larger outer part substantially cylindric in shape to receive the lacing string, and of a smaller inner part which is narrower both endwise and laterally than the outer part and is provided with a notch which opens into the larger part, and is adapted to receive the central portion of the connecting member D, which latter extends lengthwise with respect to the steel A. The connecting member D is shown as made of semicircular form and as consisting of a flat plate or strip the ends of which overlap and are secured to the steel. As a means of securing the said connecting member to the steel, the latter is shown as provided with two apertures *a a* through which the ends of the connecting member are inserted and secured by bending or folding the same against the side faces of the steel. As illustrated, the opposite end portions of the connecting member are arranged at opposite sides of the steel and inserted in opposite directions through the holes *a a*. In order to bring the outer or main portion of the loop, through which the lacing strings extend, closely adjacent to the edge of the steel, the latter is shown as provided at its outer margin with a notch or depression *a'*, while the outwardly central part of the connecting member is arranged to extend across the central part of said notch. As preferably constructed, the central part of the connecting member extends only a short distance outside of the edge of the steel, while the notch is made deep enough to provide a space or opening between the bottom of the notch and the inner edge of the connecting member large enough for the passage of the inner part of the loop and to afford free swinging movement thereof when the loop turns upon or about the connecting member.

The flat central part of the connecting member D occupies the notch in the narrower inner portion of the loop C and bears at its inner edge against the bottom of said notch. In

order to permit lateral swinging movement of the loop relatively to the steel and at the same time prevent sidewise shifting movement of the inner end of the loop, said notch has its opposite sides in outwardly divergent relation, so that the notch is of approximately V-shape, as clearly seen in Fig. 2. In order, moreover, to afford a swiveling movement of the loop with respect to the connecting member, the sides of the notch referred to are formed by means of two opposite central ribs *c c* which project inwardly from the sides of the notch and are made of V-shape in cross-section, so as to have angular edges that bear on opposite sides of the connecting member, as clearly shown in Fig. 4. Said V-shaped ribs *c c*, arranged as described, serve to hold the inner end of the loop, containing the V-shaped notch referred to, in central position relatively to the connecting member, while at the same time permitting limited turning or swiveling movement of the loop upon its own central axis, relatively to the connecting member.

From the construction described, it will be manifest that the outer part of the loop will be free to swing in a direction endwise of the steel, by reason of the engagement of its narrowed inner end with the inner edge of the connecting member, that it will be free to swing at its said outer end laterally with respect to the flat connecting member, because of the V-shaped form of the notch and will be free to swivel or turn on its own longitudinal axis, by reason of the angular shape of the two ribs *c c*. The loop is thereby given capacity for universal movement relatively to the steel, permitting it to adjust itself freely in all directions under the strain or pull of the lacing string thereon. Such loose connection of the several loops with the corset steel in connection with the loops having the openings therein extending in a direction endwise of the steels, has the important advantage of affording very free movement of the lacing string through the loop, thereby enabling the lacing string to be easily drawn through the loops and tightening the same and permitting said string to adjust itself freely, by slipping through the loops, under strains coming on the lacing strings when the corset is in use.

The cloth body of the corset where it extends around the steel *A* will be provided with a series of holes for the passage of the inner narrower ends of the loops, as indicated at *b b* in Fig. 1. The making of the steels with the notches *a¹* and the arrangement of the connecting members *D* so that their central parts extend only slightly beyond or are substantially in line with the outer edges of the steel, has the advantage of enabling the folded edge of the cloth in which is formed the pocket for the steel, to be drawn or folded smoothly over the outer edge of the

steel, as clearly seen in Fig. 1, and making it unnecessary that the holes *b b* in the cloth should be any larger than required for the passage of the loops themselves.

An important advantage is gained by making the portions of the loop which receive the lacing strings with thin metal walls extending in the direction of the opening in the loop, for the reason that by this construction the loops are made relatively narrow transversely or from side to side, so that said hooks will give no undue thickness to the lacing devices. In other words, the lacing loops so made need be no thicker than, but will occupy even less space than the edge of the corset as heretofore usually made with a marginal stay strip and lacing eyes, where the lacing strings pass through said lacing eyes and extend over the opposite sides of the stay strip, which is outside of the lacing eyes.

By making the connecting member *D* of U-shape, or of the form of a staple, the ends of which are attached to the steel, the loops may be made continuous or in one piece and the parts readily assembled by inserting the connecting member through the loop and then attaching its ends to the steel. Moreover, the making of the said connecting member of flat form, or of sheet metal, has the advantage that when so made it does not materially add to the thickness of the steel. So far as the other features of the invention are concerned, however, said connecting members may be of any desired form or construction, and I do not desire to be limited to the particular construction illustrated in said connecting members. Moreover, so far as the general features of construction in the lacing loops are concerned, the details of construction may be variously modified, and I do not, therefore, desire to be limited to the specific features illustrated except as set forth in the appended claims.

I claim as my invention:—

1. The combination with a corset steel, of a lacing loop having its eye or opening extending in a direction lengthwise of the steel, and a thin, flat, U-shaped connecting member rigidly attached at its ends to the steel with its central part extending outside the margin of the same and engaged in the said loop.

2. The combination with a corset steel, of a lacing loop having its eye or opening extending in a direction lengthwise of the steel, and a thin, flat connecting member of U-shape, the ends of which rest flatwise against the steel, and the central part of which extends outside of the margin of the steel and is engaged in said loop, the steel being provided with two apertures and the ends of the loop being inserted through said apertures and folded against the steel.

3. The combination with a corset steel,

of a lacing loop having the opening therein extending in a direction lengthwise of the steel, and a flat metal connecting member secured to the steel and engaged in the loop; 5 the opening in said loop having a narrow inner part or notch to receive said connecting member.

4. The combination with a corset steel, of a lacing loop having an opening therein extending in a direction lengthwise of the steel, 10 said opening having a larger outer part for the passage of the lacing string, and a narrower inner part or notch, and a flat metal connecting member secured to the steel and 15 engaged in said notch of the loop, said notch having outwardly divergent side faces, giving substantially V-form to the notch.

5. The combination with a corset steel, of a lacing loop having an opening therein extending in a direction lengthwise of the steel, 20 said opening having a larger outer part for the passage of the lacing string and a narrower inner part or notch, and a flat metal connecting member secured to the steel and 25 engaged in the notch, said notch having out-

wardly divergent faces giving substantially V-form to the notch and having opposite angular ribs on its inner face permitting swiveling movement of the loop upon the flat connecting member. 30

6. The combination with a corset steel having a notch in its outer edge, of a lacing loop having the opening therein extending in a direction lengthwise of the steel, and a thin, flat U-shaped connecting member, the ends 35 of which overlap and are rigidly attached flatwise to the steel at the sides of the said notch, and the central part of which extends across said notch with its inner margin inside of the line at the outer edge of the steel and is 40 engaged in said loop.

In testimony, that I claim the foregoing as my invention I affix my signature in the presence of two witnesses, this 18th day of March A. D. 1908.

MARSHALL B. GARDNER.

Witnesses:

BESS L. PFRANGLE,
THADDEUS J. MERRILL.