

No. 714,830.

Patented Dec. 2, 1902.

J. A. STAPLES.
CLIP FOR SPRINGWORK.

(Application filed Oct. 17, 1901.)

(No Model.)

Fig. 1.

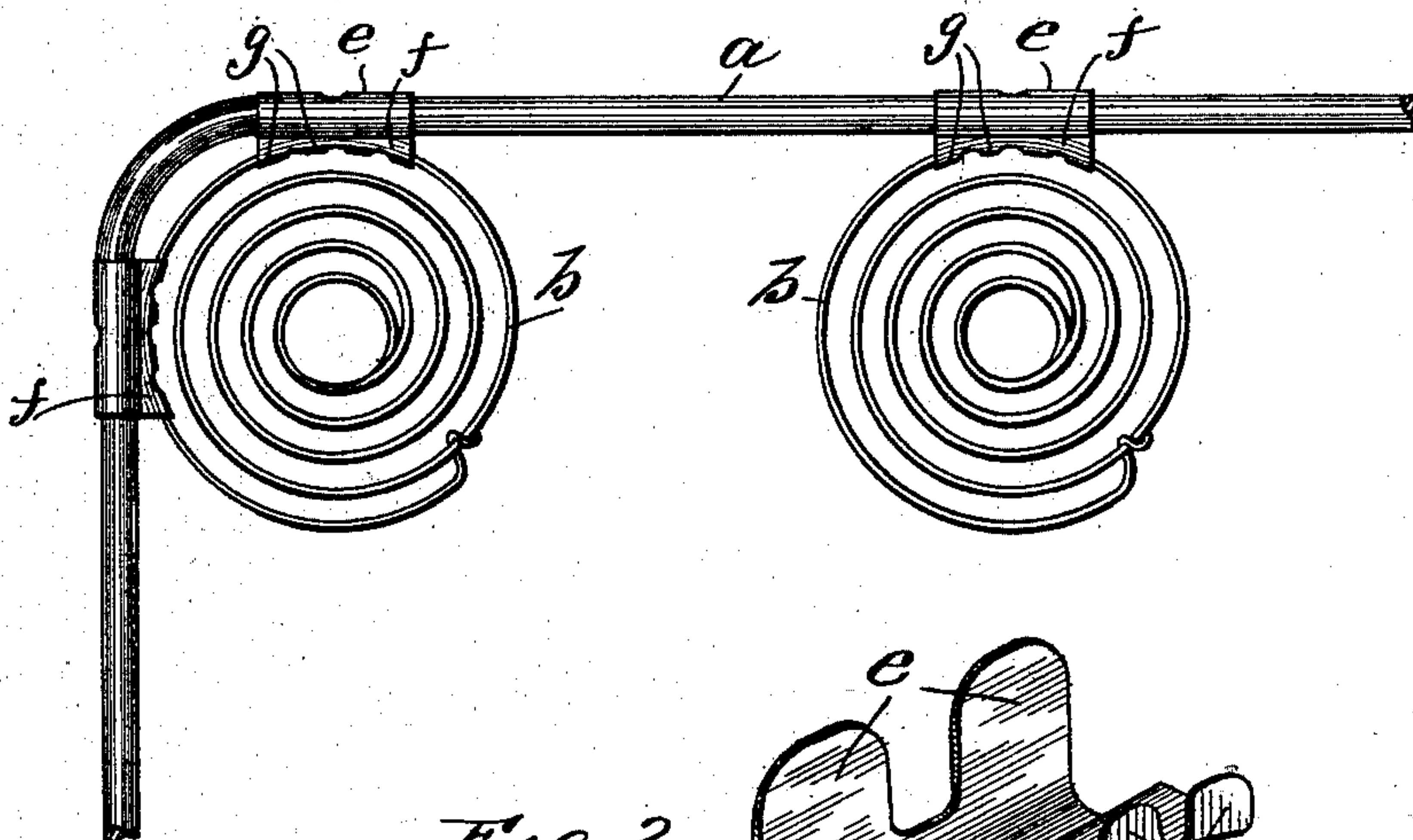


Fig. 2.

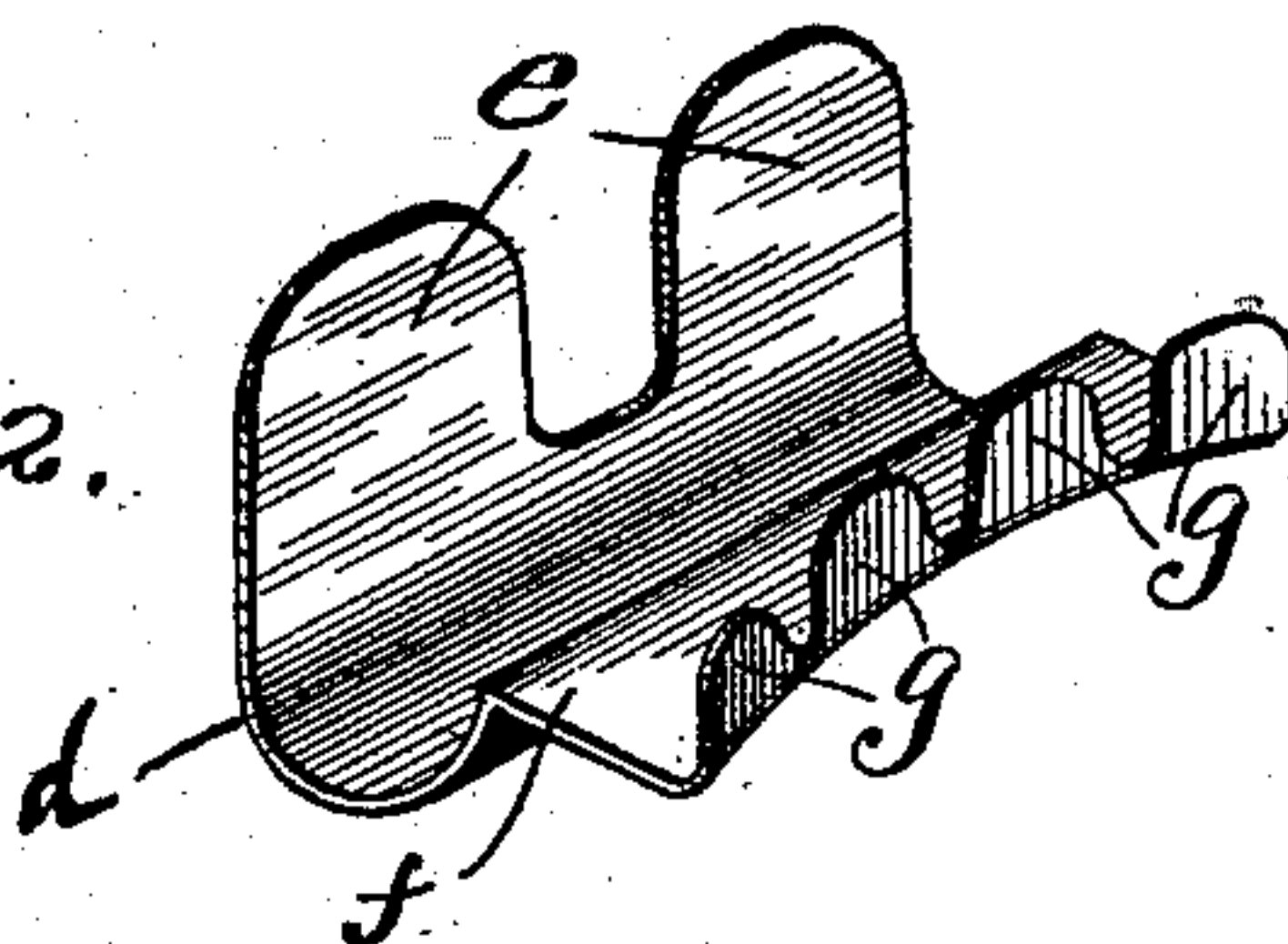


Fig. 3.

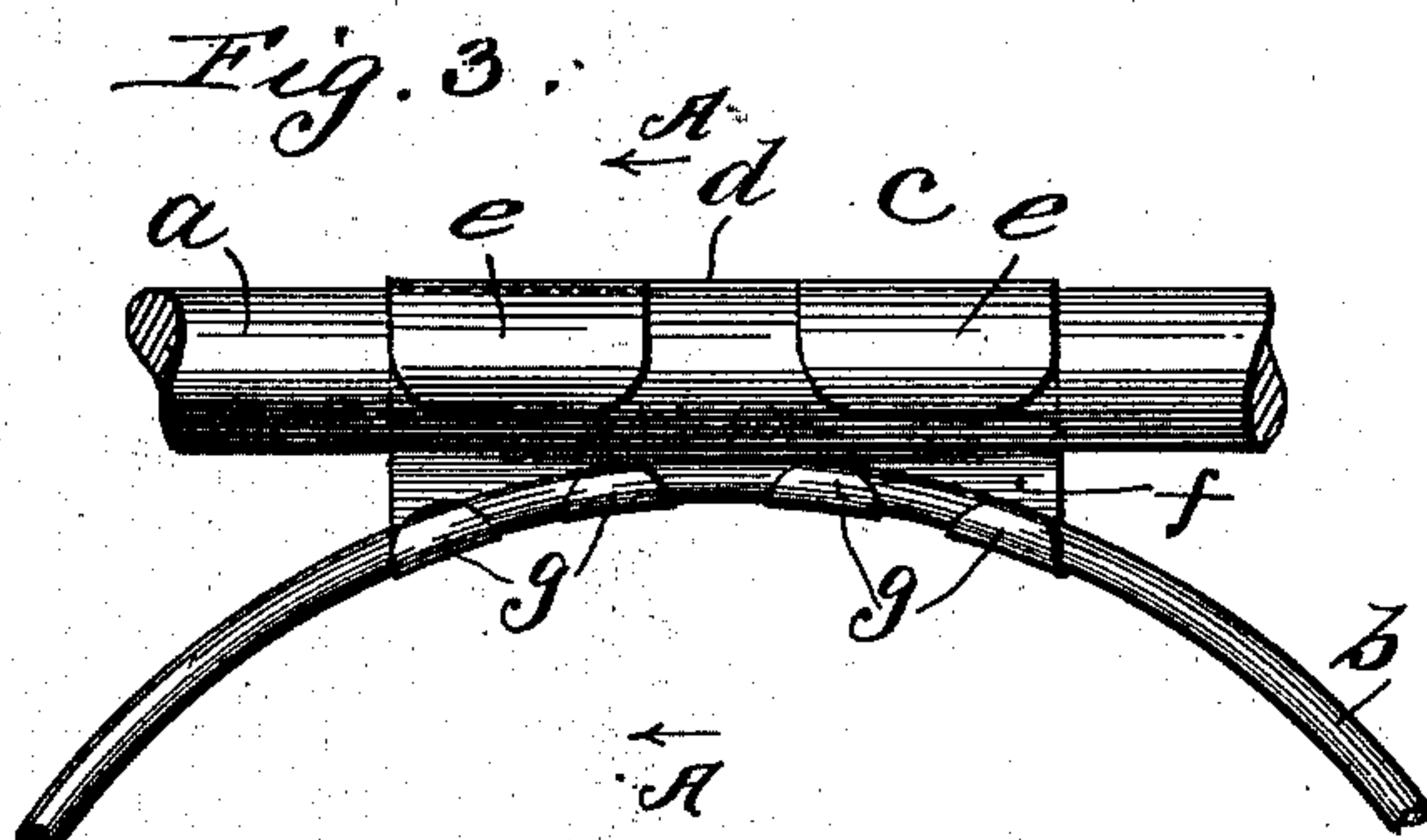
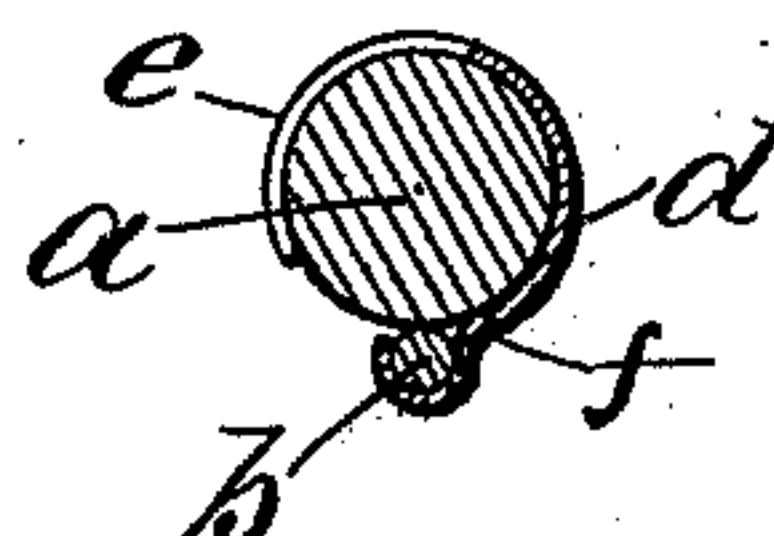


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN A. STAPLES, OF NEWBURGH, NEW YORK.

CLIP FOR SPRINGWORK.

SPECIFICATION forming part of Letters Patent No. 714,830, dated December 2, 1902.

Application filed October 17, 1901. Serial No. 78,976. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. STAPLES, a citizen of the United States, residing at Newburgh, in the county of Orange and State of New York, have invented certain new and useful Improvements in Clips for Springwork, of which the following is a specification.

My invention consists of an improvement in clips adapted to be employed for connecting together the constituent elements of springwork and is designed to produce a clip of the class described to be employed to connect a wire spring to a brace-wire or a border wire, rod, or ratan of greater diameter than the wire of the spring.

Clips have heretofore been produced and adapted for use where the spring-wire and the edge wire or the brace-wire are of the same diameter; but it will be apparent that it is impracticable to employ that particular form of clip where the edge wire is of substantially larger diameter than the spring-wire. In my present invention I have made such changes in the construction of clips as are necessary to apply the same to a spring-wire and an edge wire or brace-wire of radically-different diameters.

Referring to the accompanying sheet of drawings, in which the same reference characters are used to designate identical parts in all the figures, Figure 1 is a plan view of one corner of a bed or cushion, showing my improved clip employed in connecting the coil-springs to the edge rod or wire. Fig. 2 is an inverted perspective view of the clip before it is attached. Fig. 3 is an inverted plan view showing the clip attached, and Fig. 4 is a sectional view on the line A A of Fig. 3.

In the drawings the reference-letter *a* represents an edge wire, and the letter *b* a coil-spring of any desired form and configuration. In some classes of springwork the edge wire or rod *a* is of several times the diameter of the wire *b* of the spring which is to be secured thereto. The clips *c*, which are to be assembled to connect the rod and spring, have a body portion *d*, whose interior area corresponds to the exterior size of the rod *a* to which it is to be attached. The body *d* is provided with suitable connecting means in the form of an integral wing or of two or more ears *e*, which when the clip is in place

are bent over to engage the rod *a*, as clearly shown in Fig. 4. At the other edge of the body portion *d* is a flange or horizontal portion *f*, having its outer edge suitably shaped to lie against a portion of the wire of the top strand of the spring to which it is to be attached. The part *f* is provided with suitable means to engage the spring-wire, and when the parts are assembled these means are bent over to partially embrace the wire *b*, as clearly shown in Figs. 3 and 4.

In some forms of construction of springwork the springs are curved or composed of spiral convolutions, and for such classes of work the attaching means of the flange *f* is preferably composed of a plurality of ears *g*, which are arranged on the edge of the flange, which is curved on the arc of a circle corresponding in diameter to the diameter of the top coil of the springs with which the clips are associated. In other forms of construction of springwork springs are other than circular—as, for example, springs that are intended to constitute or compose the edge rows of springwork to make what is known as a “spring edge” to the product are generally provided with square tops in order to provide, among other things, a longer bearing on the edge wire. In such forms the edges of the flanges *f* of the clips are made straight or square, in which case opposite edges are parallel with each other. In the latter construction the attaching means may be either the ears or lugs *g* or a single integral wing. It is to be understood that the form of attaching means on either edge may be varied to suit the requirements of different forms of springwork without departing from my invention, the essential feature of which is the production of a clip adapted to be employed to attach constituent elements of springwork which are of unequal size or of different diameters.

With my improved construction of clip it will be apparent that the flange or horizontal portion *f* is so located relative to the main portion or body of the clip that when the parts are assembled the wire of the spring *b* is brought directly against the center of the rod *a*, thus forming a brace, which would not result if a flat surface were given to the clip, as in the previous forms of clips. Moreover,

with this construction when the parts are assembled the edge rod *a* projects an appreciable distance above the tops of the springs *b*, thus forming a border which serves to hold the upholstery in place, so that it will not shift sidewise.

It will of course be understood that my clips are adapted to be attached to the interior brace rods or wires of springwork, as well as to the edge wires and that the assemblage of these parts is made in the same manner; also the edge wire or the wire composing the springs may be circular or square in cross-section, and the associated portions of the clips will be formed accordingly. The drawing shows these elements as of the usual round wires, and the variations thereof here referred to are merely in the form thereof.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A clip for springwork consisting of a curved body portion having attaching means on one edge thereof and a horizontal portion on the other edge thereof, said horizontal portion provided with attaching means for the purposes described.

2. The combination with an edge rod *a* and a curved spring-wire *b*, of a clip connecting them and consisting of the semicylindrical

portion *d* provided with attaching means on one edge thereof, a horizontal portion *f* on the other edge thereof provided with ears *g* on the curved outer edge thereof.

3. A clip for springwork having a semicylindrical portion provided with attaching means on one edge, a flange on the opposite edge provided with attaching means, the latter attaching means being of less area than the semicylindrical portion, whereby the clip is adapted to connect portions of unequal size.

4. A clip for springwork having a curved body portion provided with attaching-ears on one edge, a flange on the opposite edge arranged approximately on the line of the junction of the ears and body portion, and attaching means on the edge of the flange of less size than the ears to form a channel, whereby the channel at the edge of the flange is approximately opposite the center of the channel formed by the body portion and ears.

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

JOHN A. STAPLES.

Witnesses:

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ALEX. DARRAGH.