

No. 763,150.

PATENTED JUNE 21, 1904.

W. H. BURNHAM.
SPlicing RING.

APPLICATION FILED JAN. 18, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

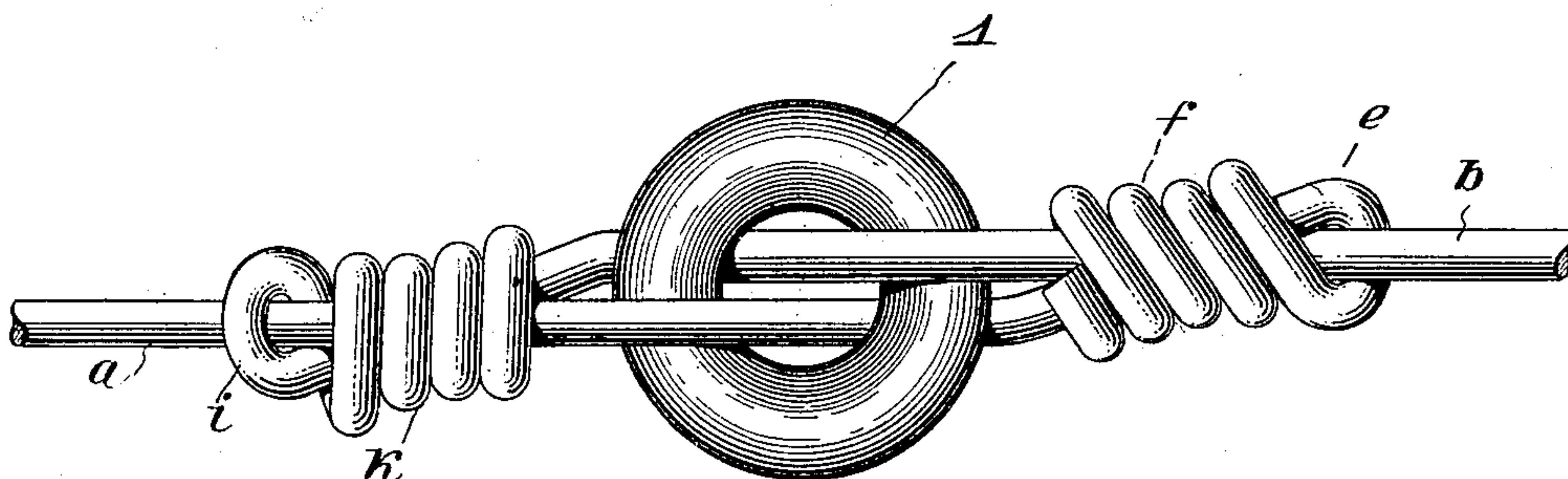


Fig. 2.

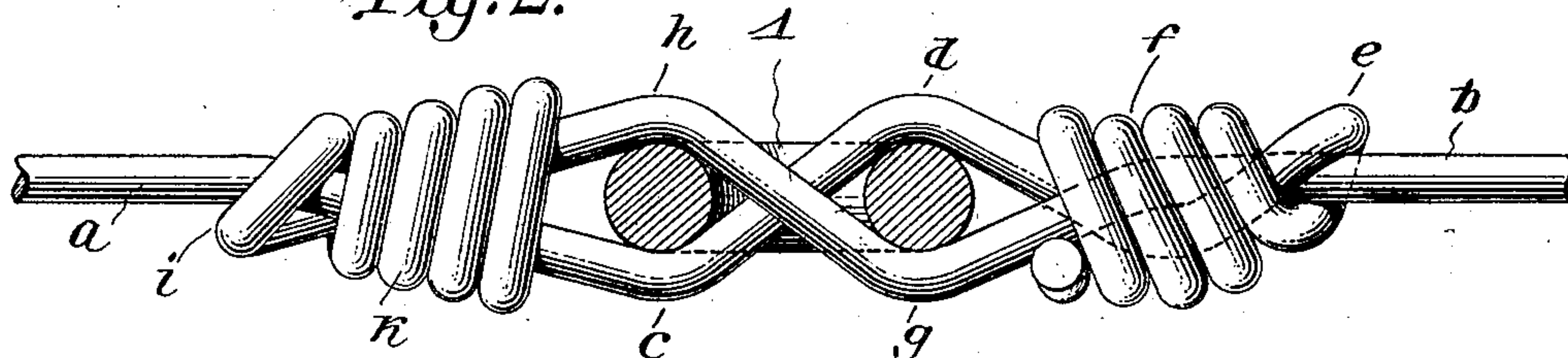


Fig. 3.

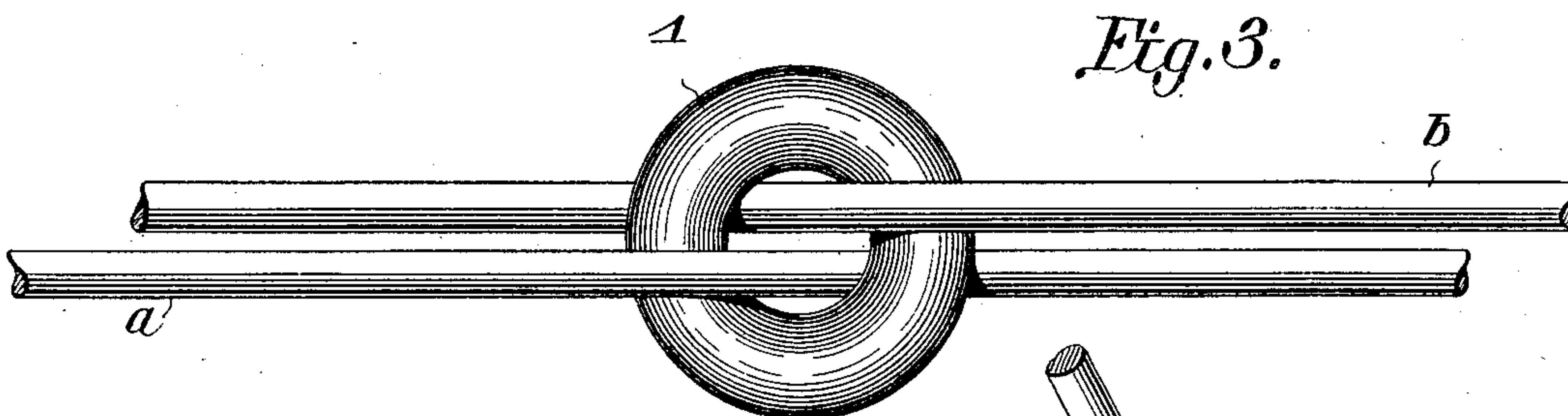
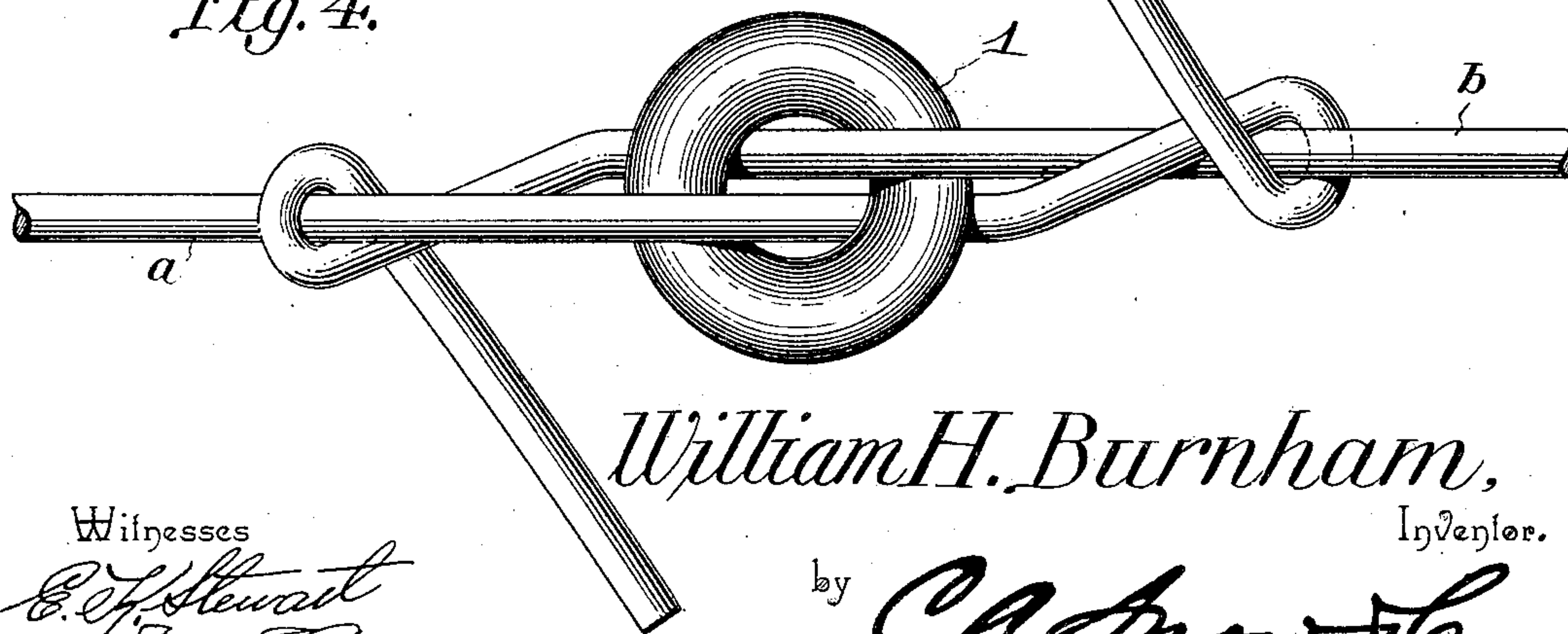


Fig. 4.



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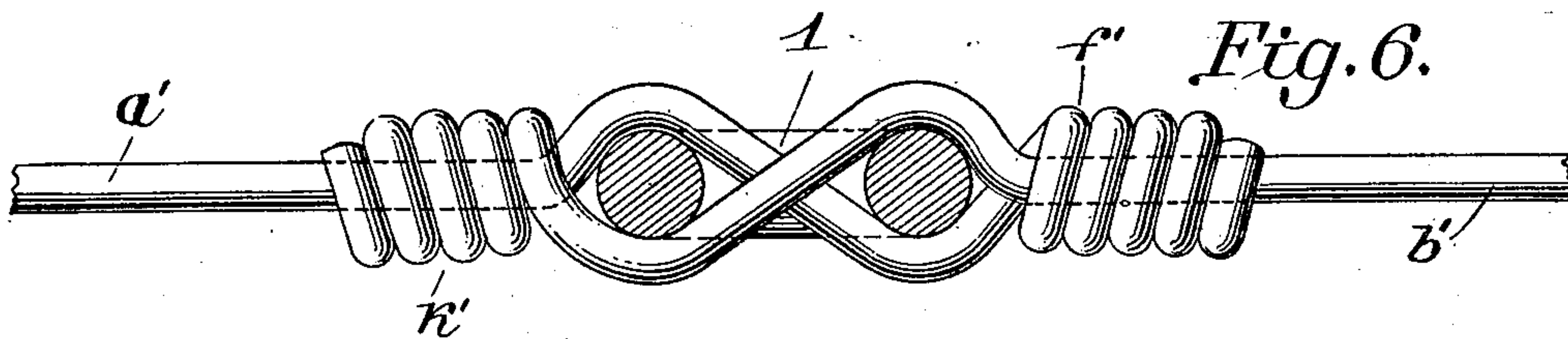
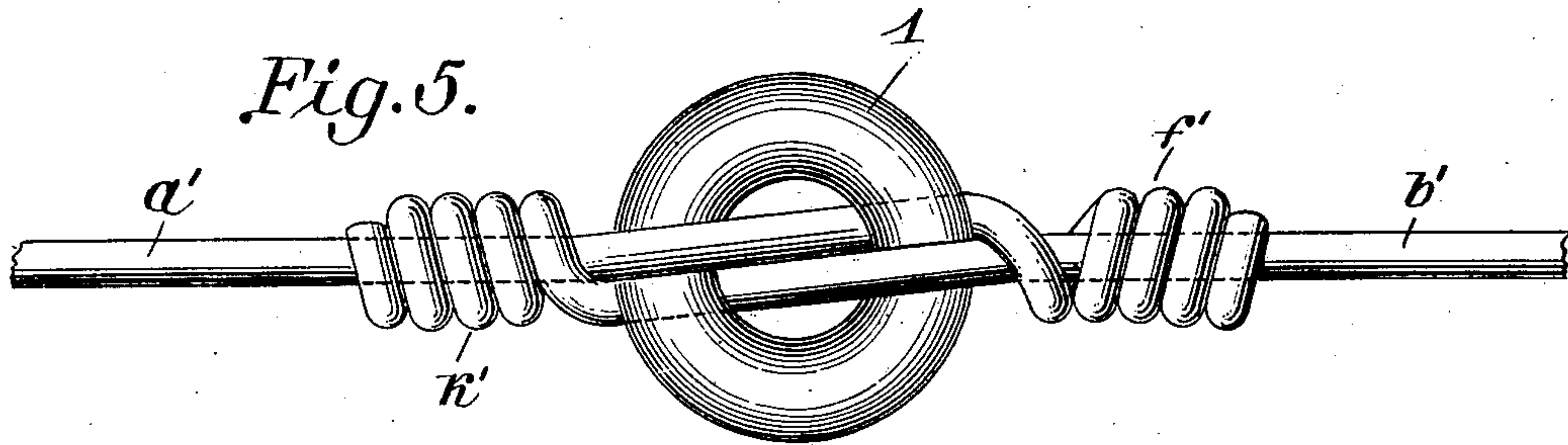
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

WILLIAM H. BURNHAM, OF ADRIAN, MICHIGAN.

SPLICING-RING.

SPECIFICATION forming part of Letters Patent No. 763,150, dated June 21, 1904.

Application filed January 18, 1904. Serial No. 189,569. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HOWARD BURNHAM, a citizen of the United States, residing at Adrian, in the county of Lenawee and State of Michigan, have invented a new and useful Splicing-Ring, of which the following is a specification.

This invention relates to improvements in devices of that class employed in the splicing of wires.

The principal object of the invention is to provide an improved means for connecting line-wires, and especially the line-wires of wire fences, which are subjected to severe tensional strain and which when connected in the usual manner are likely to be broken at the splice, owing to the weakening of the wire by the short turns usually made in the formation of the splice.

A further object of the invention is to provide a device of this character in which provision is made for forming an extensive bearing-surface for the wires at the splicing-point in order to prevent short turns in the wire and to deflect the wire in such manner that a direct longitudinal strain will be avoided and the wires held more firmly together, the splice growing tighter in proportion to the strain to which it is subjected.

With these and other objects in view, as will hereinafter more fully appear, the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is an elevation, on an exaggerated scale, of a wire-splice embodying the invention. Fig. 2 is a plan view of the same. Figs. 3 and 4 are views illustrating different steps in the method of forming the splice. Fig. 5 is a view similar to Fig. 1, illustrating a slightly-modified construction of splice. Fig. 6 is a longitudinal sectional elevation of the same.

Similar numerals and letters of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

In the connection of line-wires, and especially in connecting rolls of wire fencing that are formed of hard-steel wire, it is usual to unite the longitudinal wires by the formation of interlocking return-bends, the ends of the wire being afterward coiled around the line-wire in order to hold the two firmly together. Where the wire is of steel, the short bend so formed tends to weaken the wire and the weakest point of the line is generally found at the splice. To overcome this difficulty, I have provided means for preventing the formation of a short bend in the wire and provide a splice that is much stronger than any other part of the wire.

In the drawings, 1 designates a ring formed of cast or wrought metal and preferably circular in cross-section, although it may be elliptical, oval, or of other form, and the ring may be so shaped as to form a link, if desired. The two line-wires *a* and *b* are passed through the ring from opposite sides and in opposite directions, and the end portions of the two wires are turned over in the manner shown in Fig. 4, so as to bear upon both the line-wires and then return and bite frictionally, as in the manner of forming a Black-wall or clove hitch. The ends of the wire are thence coiled continuously until the end is reached, and the result is the finished splice shown in Figs. 1 and 2.

It will be observed more especially on reference to Fig. 2 that the cross-sectional area of the ring is such as to separate the wires. The wire *a* is bent at *c* and thence passed through the ring and is again bent at *d*, after which it is bent around the wire *b*, as indicated at *e*, and finally coiled upon itself and the mating wire *b*, as indicated at *f*. The mating wire *b* is bent at *g* and after passing through the ring is again bent at *h* and is thence wrapped around the wire *a*, as indicated at *i*, after which it is coiled upon itself and the mating wire *a*, as indicated at *k*. When strain is exerted, the wires will not

bind closely around the ring, but will be separated from each other at points outside the ring for a distance equal to the distance between the outer line of the ring and the end 5 turns of the coils. The strain will be resisted in part by the turns of the wire, and this strain will tend to open up the coils, but may be rendered more effective by increasing the number of turns to any desired extent. Aside 10 from this the strain is in a lateral direction and not in the direct line of the wire, and this tends to tighten the first turn of the wire on the line-wire, the effect being similar to that gained in a Blackwall hitch, an effect which 15 cannot be gained if the strain was exerted in the direct line of the wire, as in such case there would be a tendency of the first turn to slip. In an ordinary splice the opposite turns of the wire will be drawn together under longitudinal strain; but in the present case the 20 coils are held from contact with each other and cannot even engage the outer surface of the ring, owing to the angular relation of the wires, as will be evident on reference to Fig. 2. This prevents the coils from jamming and lessens liability of breakage.

Inasmuch as the principal object of the invention is to prevent or minimize the danger of breakage of hard-steel wire from the short 30 turns usually made in a wire-splice, it is obvious that the ring may be used in connection with splices of different character.

In Figs. 5 and 6 there is shown a slight modification in which the wires a' b' are passed 35 through the ring in the same manner as illustrated in Figs. 1 and 2, the wires, however,

being twisted to form circular coils, as indicated at f' k' .

The splicing-rings forming the subject of this invention can be made at very small cost 40 of common cast-iron and require no finishing after being broken from the gatings, and as they present no sharp edges for contact with the wire it is impossible to cut or weaken the wire, as is the case of splicing of the ordinary 45 type.

Having thus described the invention, what is claimed is—

1. In a wire-splice, a ring through which the opposite ends of the wires to be united 50 pass, respectively, in opposite directions to thereby deflect the wire laterally, the end portion of each wire being coiled on the opposing wire at a point beyond the periphery of the ring. 55

2. In a wire-splice, a ring through which the opposite ends of the wires to be united pass, respectively in opposite directions, to thereby deflect the wire laterally, the end of each wire being bent around the opposing 60 wire at some distance beyond the periphery of the ring, and being thence coiled continuously upon itself and the opposing wire in a direction toward the ring.

In testimony that I claim the foregoing as 65 my own I have hereto affixed my signature in the presence of two witnesses.

W. H. BURNHAM.

Witnesses:

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