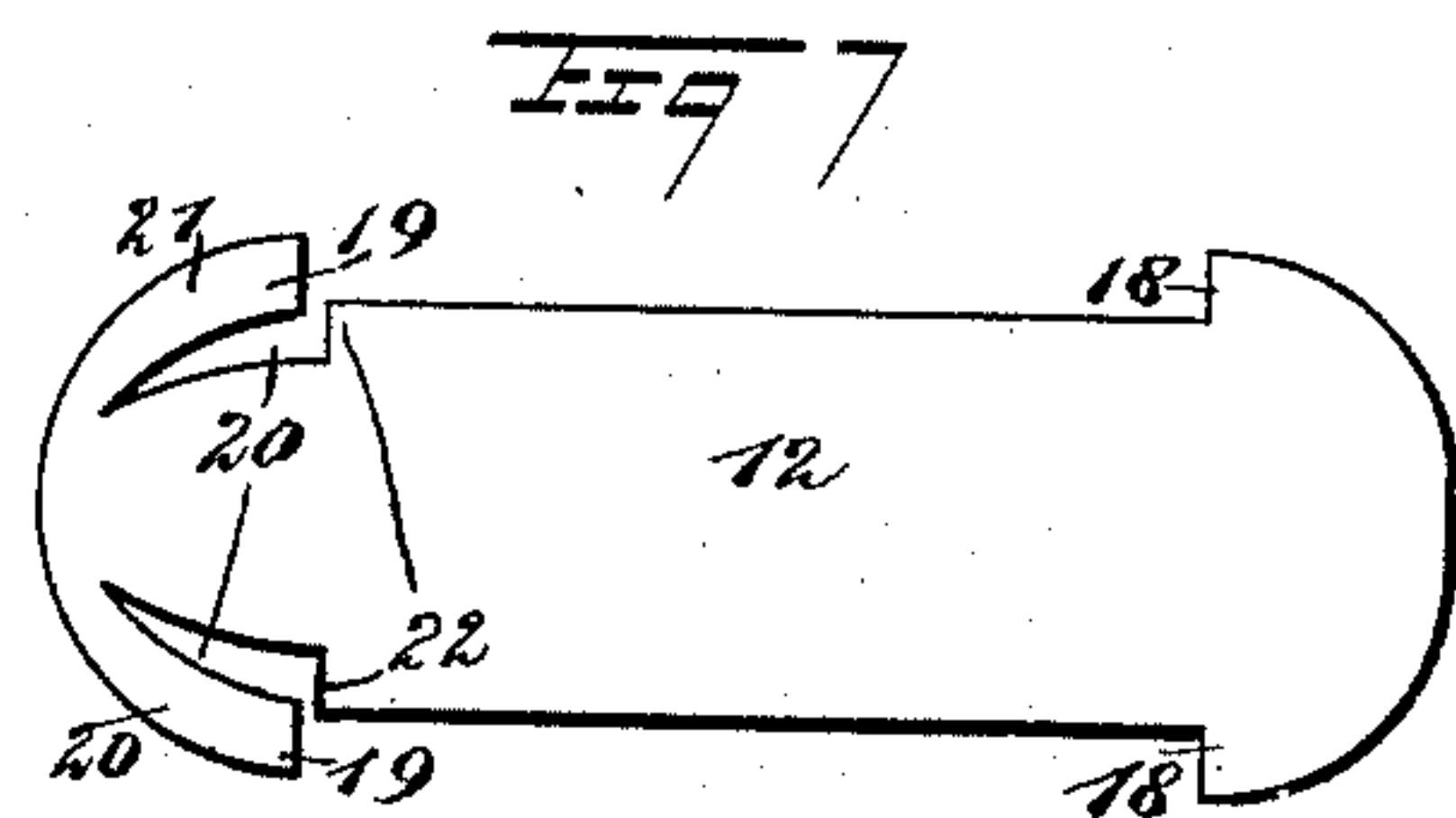
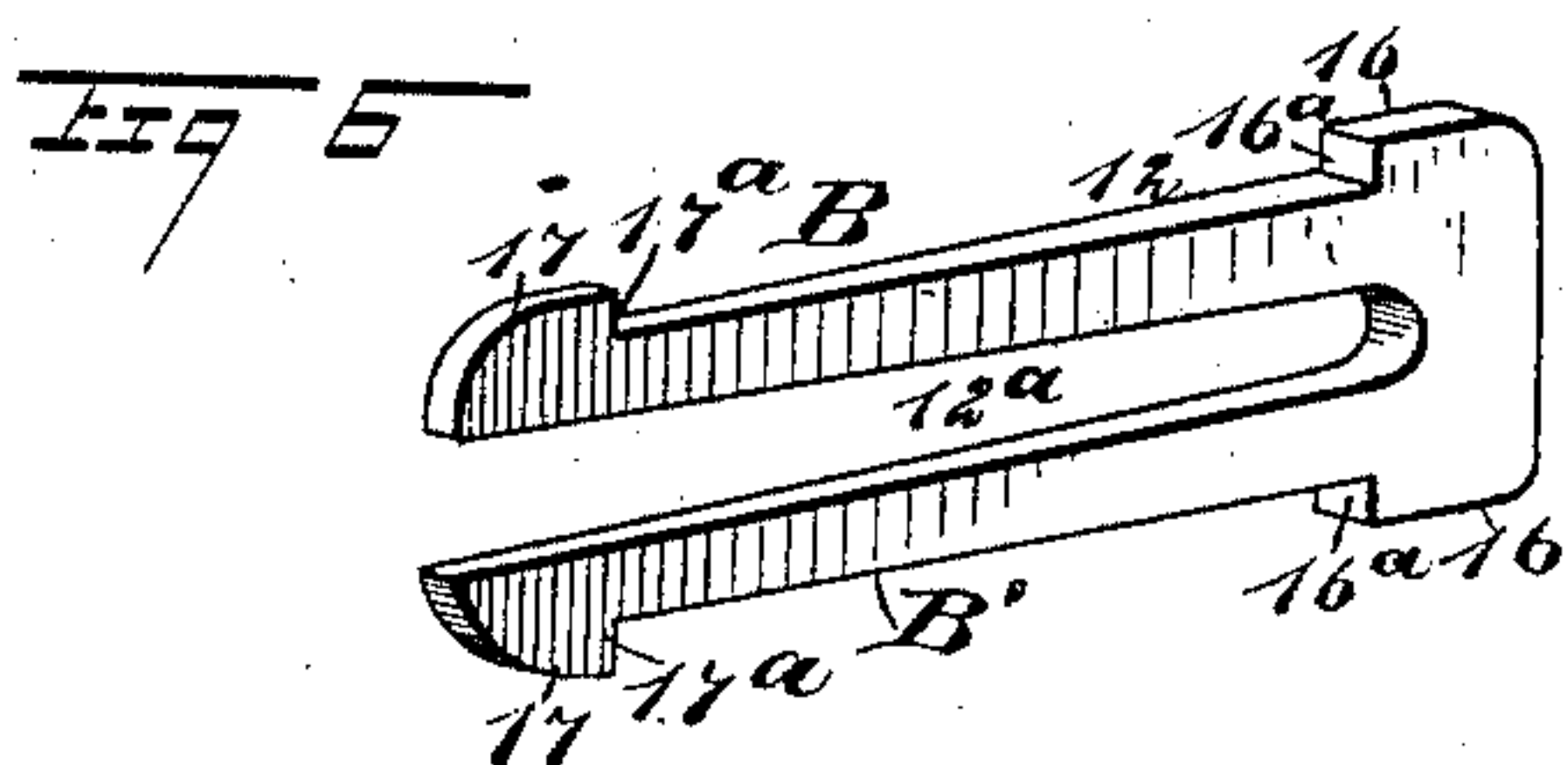
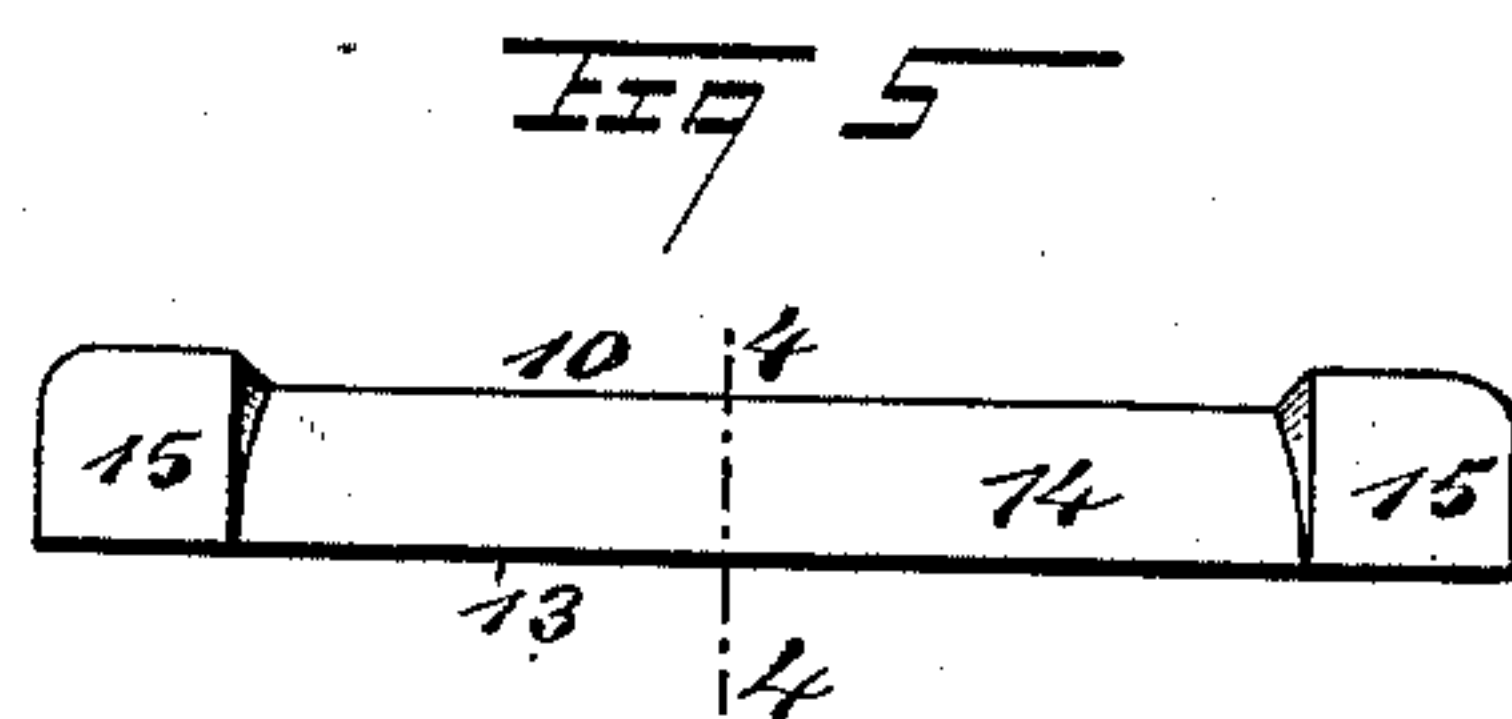
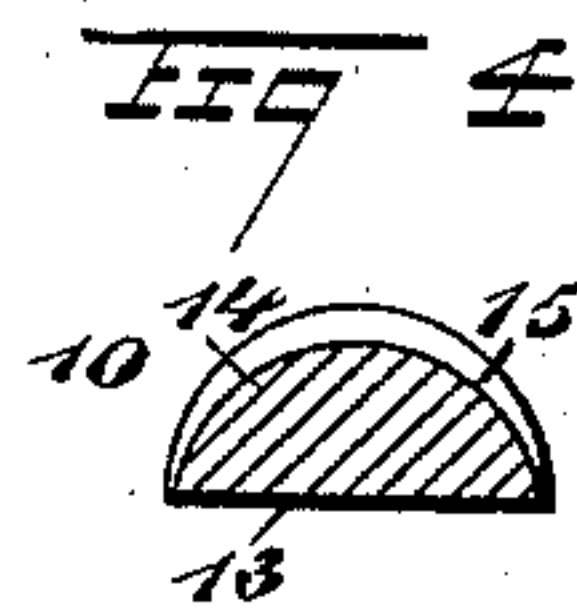
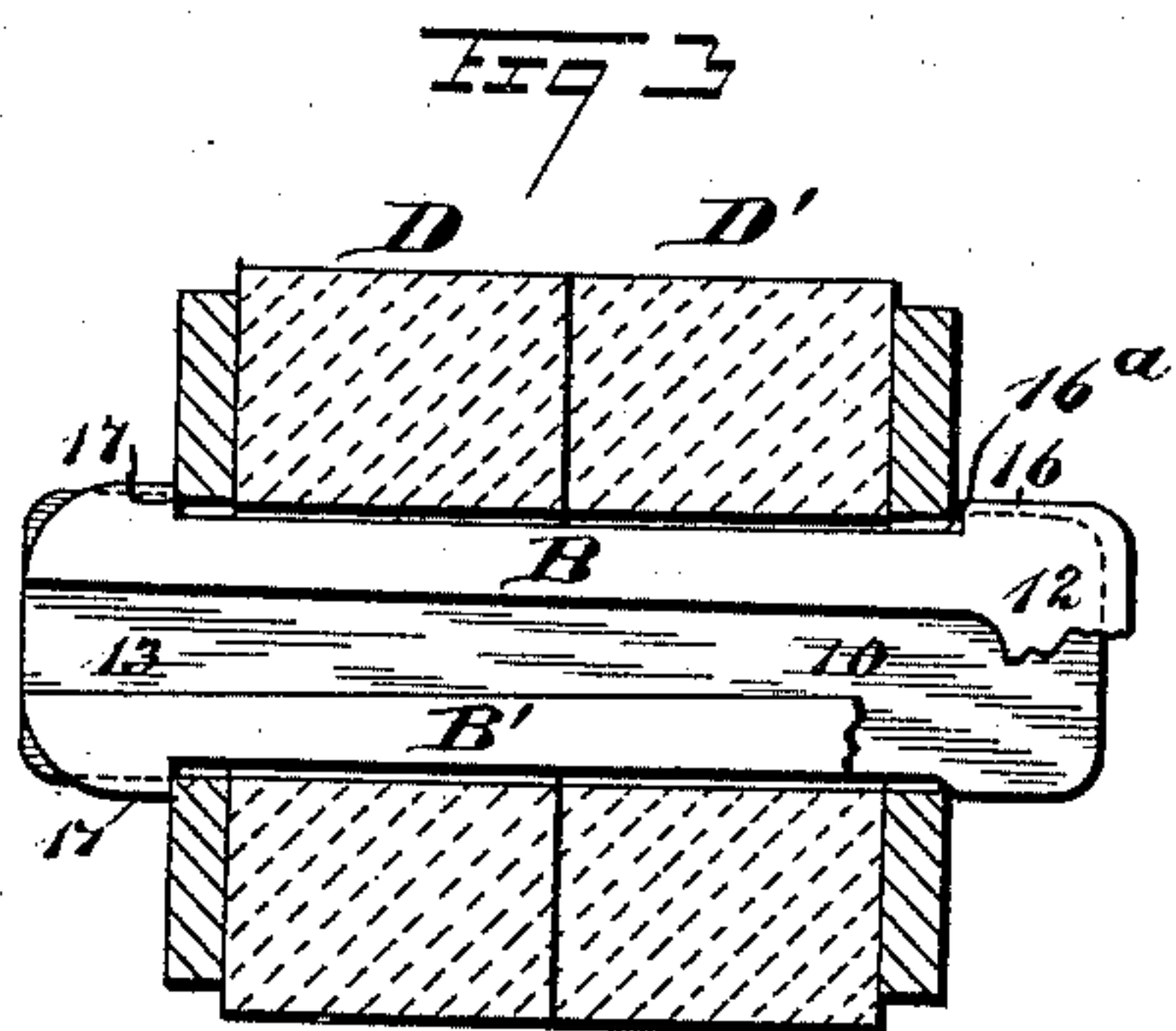
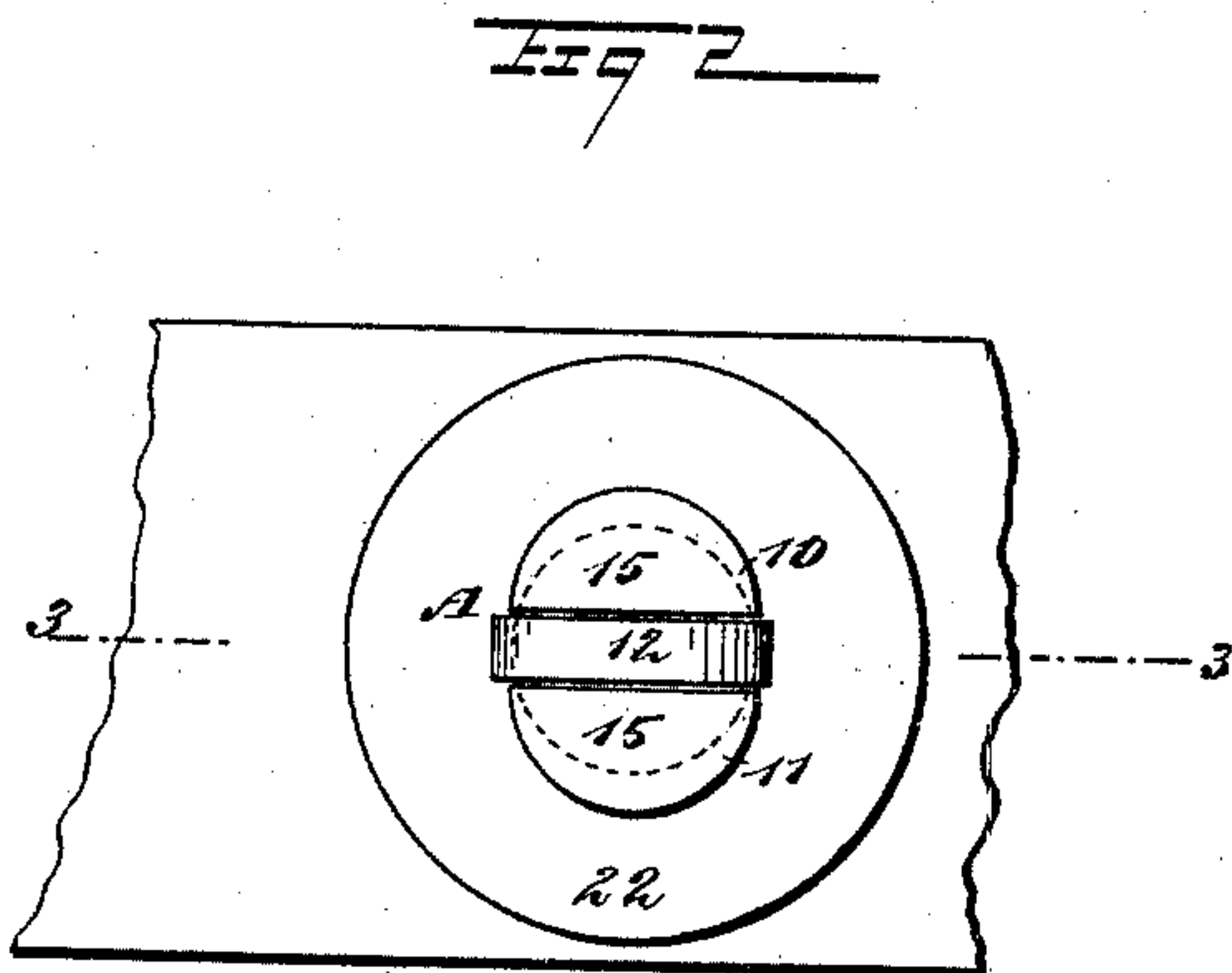
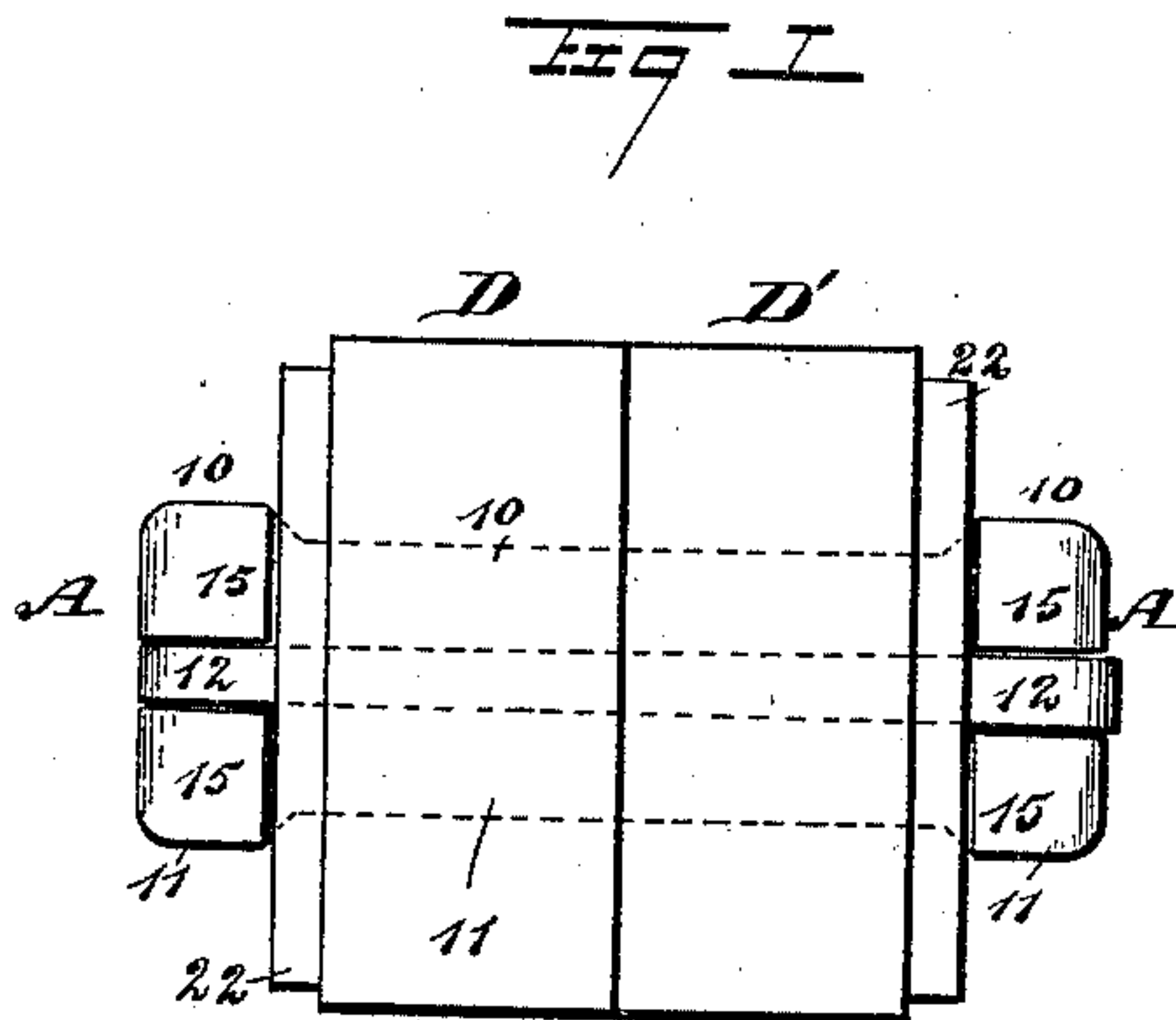


(No Model.)

A. ASSORATI.
BOLT.

No. 475,746.

Patented May 31, 1892.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ANTENOR ASSORATI, OF NEW YORK, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO HIMSELF, AND EDWARD L. DESVERNINE, OF BENSONHURST, NEW YORK.

BOLT.

SPECIFICATION forming part of Letters Patent No. 475,746, dated May 31, 1892.

Application filed September 21, 1891. Serial No. 406,333. (No model.)

To all whom it may concern:

Be it known that I, ANTENOR ASSORATI, a subject of the King of Italy, at present residing at New York, in the county and State of New York, have invented a new and Improved Bolt, of which the following is a full, clear, and exact description.

My invention relates to an improved bolt and means for locking the same when utilized on a tie or fastening device.

The object of the invention is to construct a locking-bolt in such manner that two or more objects may be expeditiously, conveniently, and firmly united and effectually prevented from having play in any direction.

A further object of the invention is to construct the bolt in a simple and economic manner.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

Figure 1 is an end view of two blocks united by the improved locking-bolt and a partial side elevation of the bolt. Fig. 2 is a side elevation of one of the blocks, one end of the bolt being shown. Fig. 3 is a section taken practically on the line 3 3 of Fig. 2. Fig. 4 is a cross-section of one member of the bolt, taken on the line 4 4 in Fig. 5; and Fig. 5 is a side elevation of said member. Fig. 6 is a perspective view of the key member of the bolt, and Fig. 7 is a side elevation of a modification of the key.

The bolt A comprises three members—two clamping members 10 and 11 and a locking or key member 12. The clamping members are of like construction, each being provided with a flat straight inner face 13, a cylindric or semicircular outer face 14, and a head 15, formed upon the cylindric face, one at each end. These heads are semicircular in cross-section, as are likewise the body portions of the clamping members, as illustrated in Fig. 4. The locking or key member is flat and

straight upon both faces and is of equal thickness throughout its length and breadth, and, as shown in Fig. 6, is provided with a central longitudinal recess 12^a, extending through one end and within a short distance of the other, thus in this member of the device two legs B and B' are formed capable of spring action, the key being made from a proper metal to accomplish that end. At the transversely-solid portion of the key, which for convenience I will term its "head," an offset 16 is produced at each side edge, forming shoulders 16^a, and a like offset 17 is made integral with the end of each leg at its outer edge, producing shoulders 17^a. The outer or free extremities of the legs are rounded off, as are also their offsets and the outer corners of the head.

In Fig. 7 I have illustrated a modified form of the locking or key member of the bolt in which the longitudinal slot is omitted. Both ends are semicircular in marginal contour and at the head shoulders 18 are produced, corresponding to the shoulders 16^a in Fig. 6. At the opposite end shoulders 19 are made corresponding to the shoulders 17^a in Fig. 6; but at each of these shoulders a curved essentially-V-shaped recess 20 is cut, forming thereby tongues 21 at the margins and inner shoulders 22, the recesses being so deep that the tongues, which are to be of spring metal, may be pressed inward until the width of the key at this end is reduced to practically the width of the body.

When the bolt is shaped as above described, a circular hole is made in the parts D D' to be united. The two clamping members 10 and 11 of the bolt are then placed with their flat faces together or approximately so, and both members are passed into and through apertures in the parts to be connected after such apertures have been brought into registry. Washers 22 are then passed over the heads at both ends of the members 10 and 11 until they engage with the outer faces of the parts to be joined, at which time the washers will be immediately back of said heads, as shown in Figs. 1 and 3. This disposition of the parts having been accomplished, the key or locking member is introduced between the inner straight

faces of the clamping members and is driven until its ends are flush or practically so with the ends of the clamping-sections, as illustrated in Figs. 1 and 3. While the slotted
 5 end of the key, when such a key is employed, is within an aperture of the parts to be united or the opening in a washer, the legs of the key are pressed in direction of each other; but the moment the offsets 17 are free the legs
 10 spring apart and the shoulders 17^a engage with the outer face of a washer, the opposite shoulders 16^a being in engagement with the other washer, as is best shown in Fig. 3.

The action of the key shown in Fig. 7 is
 15 substantially the same as that of the key shown in Fig. 6, the only difference being that the tongues 21 are forced inward and spring outward instead of the legs B and B'.

It is evident that through the medium of a
 20 device such as has been described two or more parts or articles may be rigidly connected in an expeditious, convenient, and economic manner.

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

1. As an improved article of manufacture, a lock-bolt consisting of two clamping members having flat straight inner faces and heads
 30 formed at their ends upon their outer surfaces, and a locking or key section of the same thick-

ness throughout its length and provided at one end with contractile and expansible sections and shoulders at both ends, as and for the purpose specified.

2. A lock-bolt consisting of two clamping members semicircular in cross-section and provided upon their cylindrical faces with a head at each end, and a locking or key member adapted to pass between the flat faces of the
 40 clamping members, said key member being also provided with offsets upon opposite edges at both ends, the offsets at one end being capable of converging under pressure and diverging when free from pressure, substan-
 45 tially as specified.

3. A lock-bolt consisting of two clamping members semicircular in cross-section and provided upon their cylindrical faces with heads, one at each end, and a locking or key
 50 member constructed of spring metal and comprising a head and legs emanating therefrom in substantially parallel lines, the head and legs being provided with offsets upon their outer edges, and said key being adapted to
 55 enter between the clamping members and engage therewith throughout their length, substantially as described.

ANTENOR ASSORATI.

Witnesses:

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 C. SEDGWICK.