

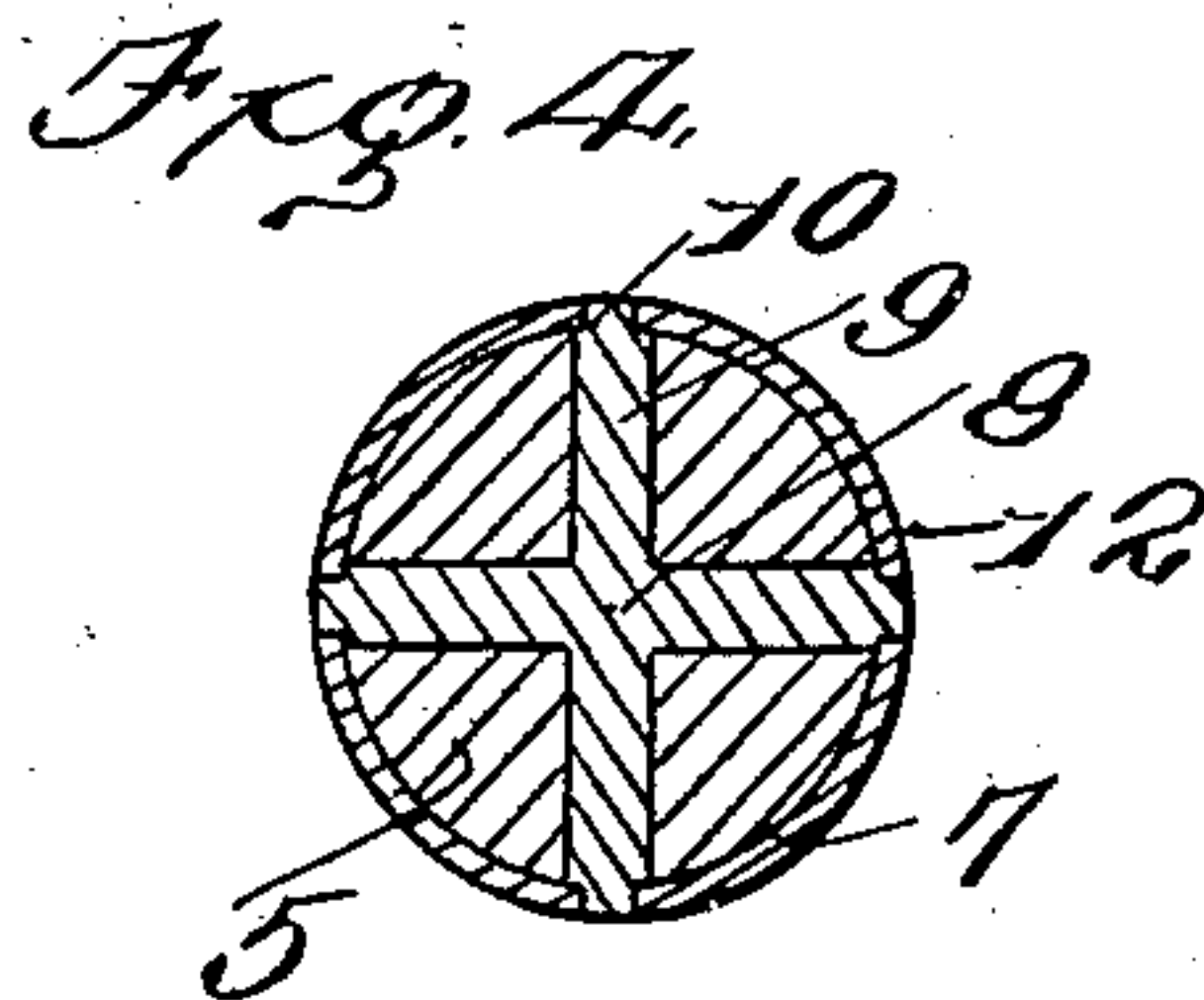
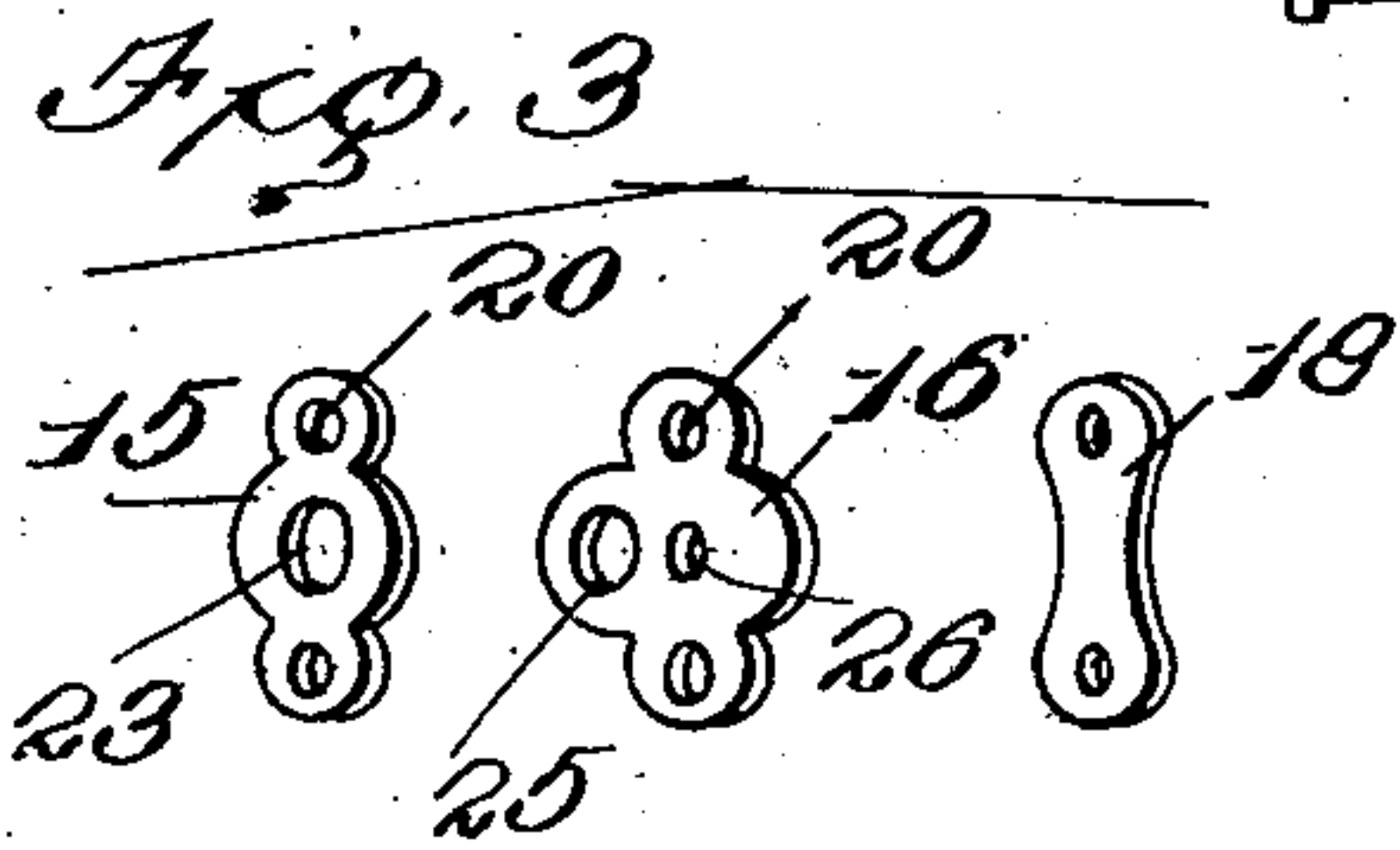
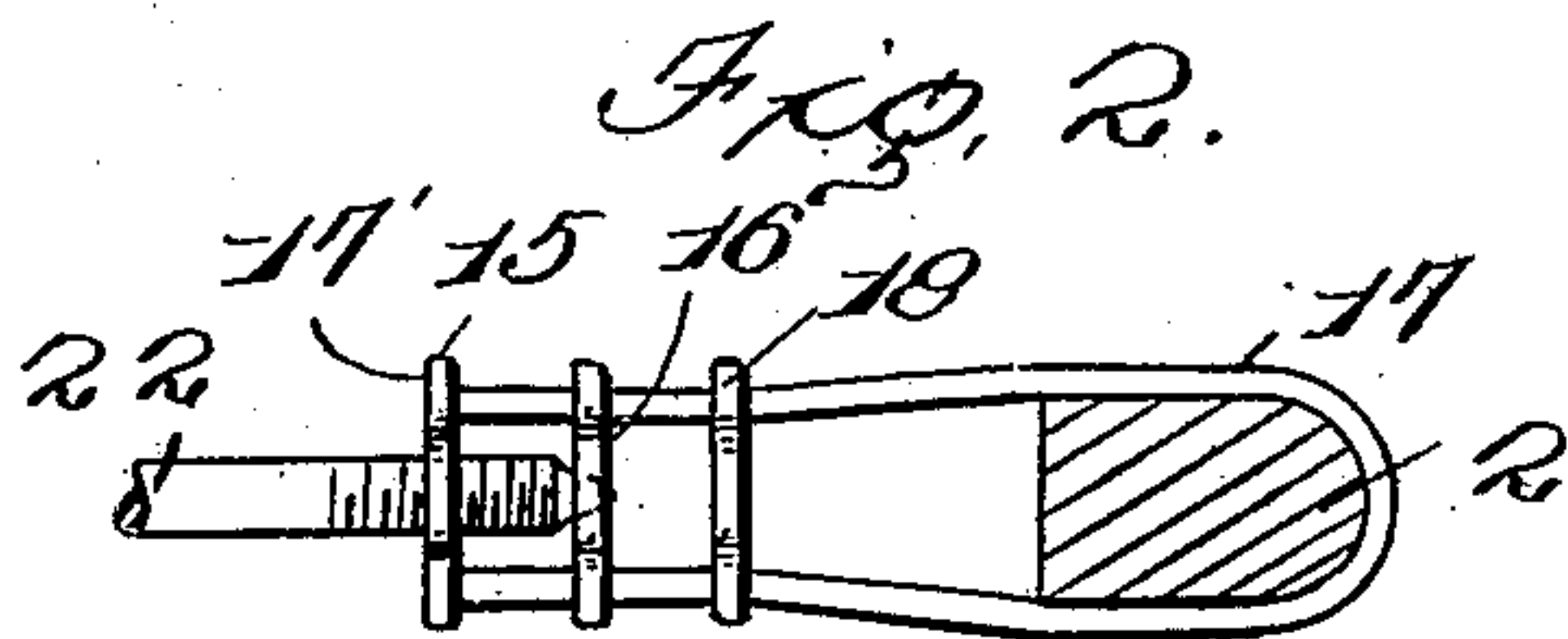
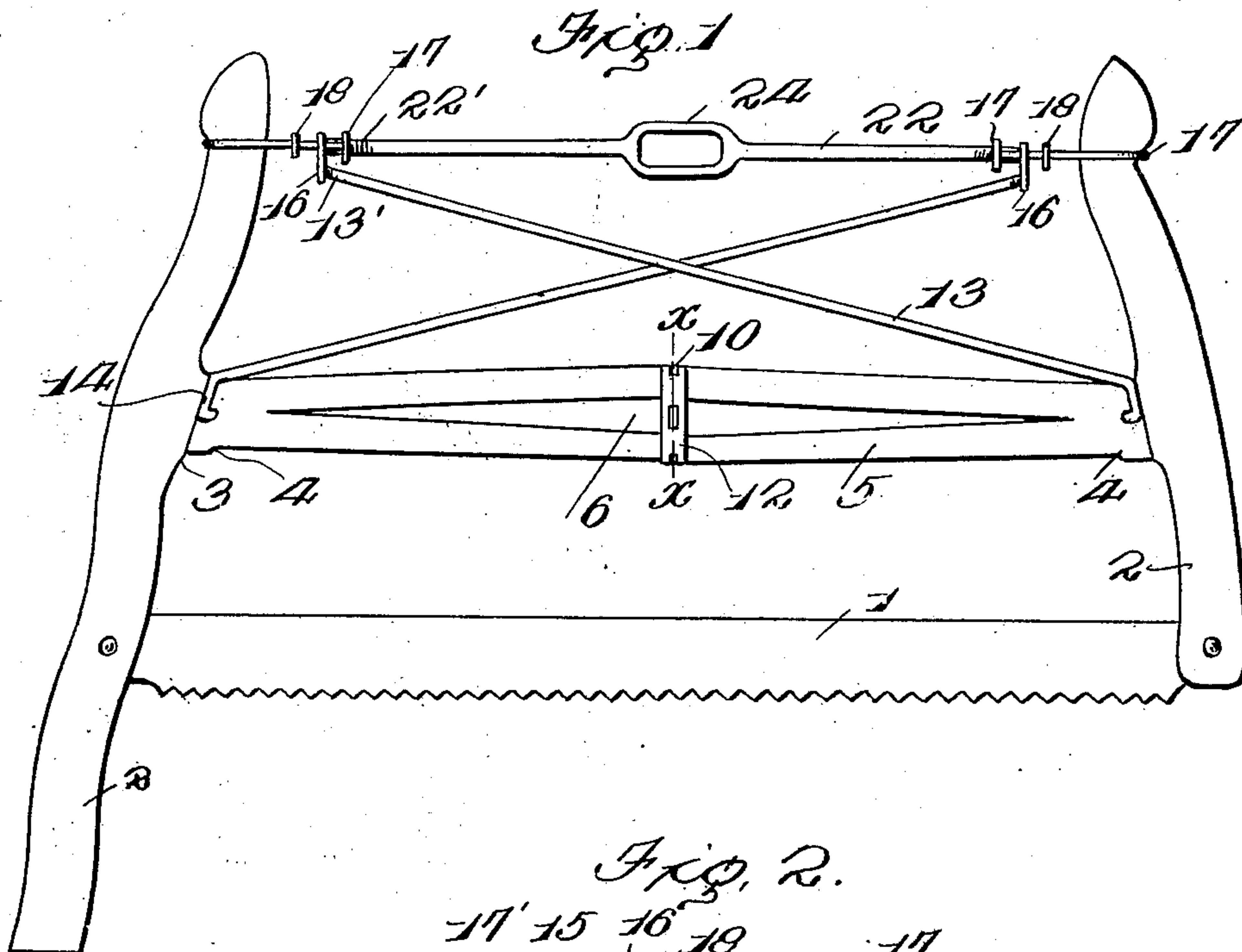
F. L. HEMMER.

BUCKSAW.

APPLICATION FILED JULY 31, 1908.

914,833.

Patented Mar. 9, 1909.



Witnesses

W. H. Henderson

Inventor

Frederick L. Hemmer

By

W. H. Macey, Attorneys

UNITED STATES PATENT OFFICE.

FREDERICK L. HEMMER, OF EAST ARLINGTON, VERMONT.

BUCKSAW.

No. 914,833.

Specification of Letters Patent.

Patented March 9, 1909.

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To all whom it may concern:

Be it known that I, FREDERICK L. HEMMER, a citizen of the United States, residing at East Arlington, in the county of Bennington and State of Vermont, have invented certain new and useful Improvements in Bucksaws, of which the following is a specification.

The object of my invention is to provide a saw wherein certain parts are so constructed and arranged as to secure advantages not heretofore obtained. In the use of saws of this character, especially when bringing the blade in contact with the surface of an object, an extraordinary strain is placed upon the cross bar and braces, sometimes resulting in the buckling of the blade. To eliminate this objectionable feature, I have by means of a novel arrangement and construction of parts produced a saw capable of withstanding the strain placed upon the handles and braces without danger of bending and thereby allowing the blade to buckle.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a side elevation of my improved device, Fig. 2 is an enlarged detail sectional view taken through one of the end pieces and showing the method of connecting the tension and brace rods with the end pieces, Fig. 3 is an illustration of the tension and brace rod nuts and tie bar, and Fig. 4 is a transverse sectional view of the cross bar, spreader and band, taken on the line $x-x$ of Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates an ordinary toothed saw blade bolted or otherwise secured at both ends to the handles or end pieces 2, said handles being provided with squared flat portions 3 to form a suitable abutment for the squared flat end portions 4 of the cross bar 5. The cross bar 5 is made of any suitable material, the body portion of which is cylindrical in shape and is sawed, formed, or otherwise longitudinally divided into four equal parts between each squared end portion 4, as shown at 6.

The numeral 7 designates a transverse groove formed in and extending around the periphery of the cross bar 5 midway between

the squared end portions 4 and gives to each section of the cross bar a necessary amount of flexibility for the introduction of a spreader 8. Said spreader may be of any desired construction with projections or arms 9 having tenons 10 thereon adapted to pass through corresponding openings 11 in a metal band 12. The arms or projections 9 when the spreader 8 is placed in position protrude through openings 6 in the cross bar 5 thereby forcing the four sections to assume the form of a trussed brace. The ends of the metal band 12 riveted or otherwise suitably fastened fits into the groove 7 in the cross bar 5, the openings 11 passing over the tenons 10 thereby holding the spreader 8 rigidly in position. As before stated, in this position, the four sections of the cross bar 5 form a trussed brace and the strain exerted transversely thereon by pressure applied to the end pieces 2 in either direction will be effectually taken up by the rigidity of the cross bar.

The numeral 13 designates diagonally disposed brace rods provided with hooked end portions 14 adapted to be anchored in holes bored in one side of the squared end portions 4 of the cross bar 5, and provided at their other ends with threaded portions 13'.

A metal band or clip 17 is placed around the upper ends of the end pieces 2 and held in position by a tie bar 18, the ends of the clip extending through openings in said tie bar and correspondingly located openings 20 in the nuts 15 and 16, said clip 17 is turned or otherwise provided with heads 17' by means of which the nuts 15 and 16 are retained thereon.

A tension rod 22 provided with threaded ends 22' one threaded right, the other left, extends across the saw frame at the top thereof and is held in position by the right and left threaded nuts 15 as shown at openings 23. The rod 22 is formed with outwardly curved portions 24 to provide a handle by which said rod may be conveniently turned in either direction. It will be readily understood that with the parts threaded in the manner described, the rod 22 when turned in one direction by means of the handle 24 the oppositely threaded nuts 15 draw the end pieces 2 toward each other, thereby rigidly setting up the saw frame, and by a reverse movement knocking it down.

The numeral 25 designates an opening in the nut 16 into which the brace rods 13 are screwed or otherwise conveniently secured,

and an opening 26 of smaller diameter than the threaded ends 22' of the rod 22, forms a socket for said rod and by means of which the brace rods 13 are held under tension.

5 With the arrangement of the several parts as shown, and especially by the construction of the brace bar 5, the end pieces 2 are held against movement in relation to the other parts regardless of transverse strain placed
10 upon cross bar 5, brace rods 13, saw blade 1, and rod 22.

To set up the frame, the rod 22, after the brace bar is placed in position, is turned in the direction whereby the right and left
15 threaded ends working in nuts similarly threaded will strain the upper portion of the end pieces 2 toward each other, and in this position the saw frame is effectively braced in all directions by the trussed brace formed
20 by the cross bar 5.

Having thus described the invention, what is claimed as new is:

1. A saw of the character described, comprising supporting end pieces, a saw blade
25 connected thereto, brace rods secured to said end pieces and tending to draw the same together, a cross bar interposed between said end pieces and abutting against the same, said cross bar being formed with a longitudi-
30 nally extending opening, and a spreader fitting in said opening and exerting a lateral tension upon the parts of said cross bar defining said opening.

2. A saw of the character described, comprising supporting end pieces, a blade se-
35 cured thereto, brace rods connected to said cross bar and exerting tension thereon to draw the same together, a cross bar interposed between said end portions and in
40 abutting relation therewith, the said cross bar being formed with a longitudinally extending opening and a transverse groove formed in its exterior, a spreader fitting in
45 said opening and exerting a lateral tension on the portions of the cross bar defining said opening, and a band encircling said cross bar in said groove and connected to said spreader.

3. A saw of the character described, comprising supporting end pieces, a blade con-

50 nected to said end pieces, brace rods secured to said pieces and tending to draw said end pieces together, a cross bar interposed between said end pieces and in abutting relation therewith, the said cross bar being
55 formed with two longitudinally extending openings formed therein and intersecting each other, a cruciform spreader the arms of which are fitted in the respective openings and are formed at their extremities with
60 tenons, and a band encircling the cross bar and formed with openings receiving said tenons.

4. A saw of the character described, comprising supporting end pieces, a saw blade
65 secured thereto, a cross brace interposed between the end pieces with its ends engaging said end pieces near the middle of the latter, said cross bar being formed at its ends with
openings, brace rods formed at one end with
70 hooked portions engaged in said openings, said brace rods crossing each other, clips securing the upper ends of said brace rods to the upper ends of the end pieces, and means
for exerting a tension upon said brace rods.

5. A saw of the character described, comprising supporting end pieces, a saw blade
75 secured thereto, a cross bar interposed between said supporting end pieces which abut thereagainst intermediate of their ends, brace rods connected to the opposite ends
80 of the cross bar and extending upwardly in opposite directions, clips secured to the upper ends of the end pieces, oppositely threaded nuts secured to said clips respec-
85 tively, a tension bar formed with oppositely threaded ends working through said nuts, and other nuts mounted on said clips and secured to the upper ends of the respective
90 brace rods, the tension bar bearing against said last named nuts, as and for the purpose set forth.

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

FREDERICK L. HEMMER. [L. s.]

Witnesses:

JOHN M. CLARK,
WILLIAM C. MATTHEWS.