

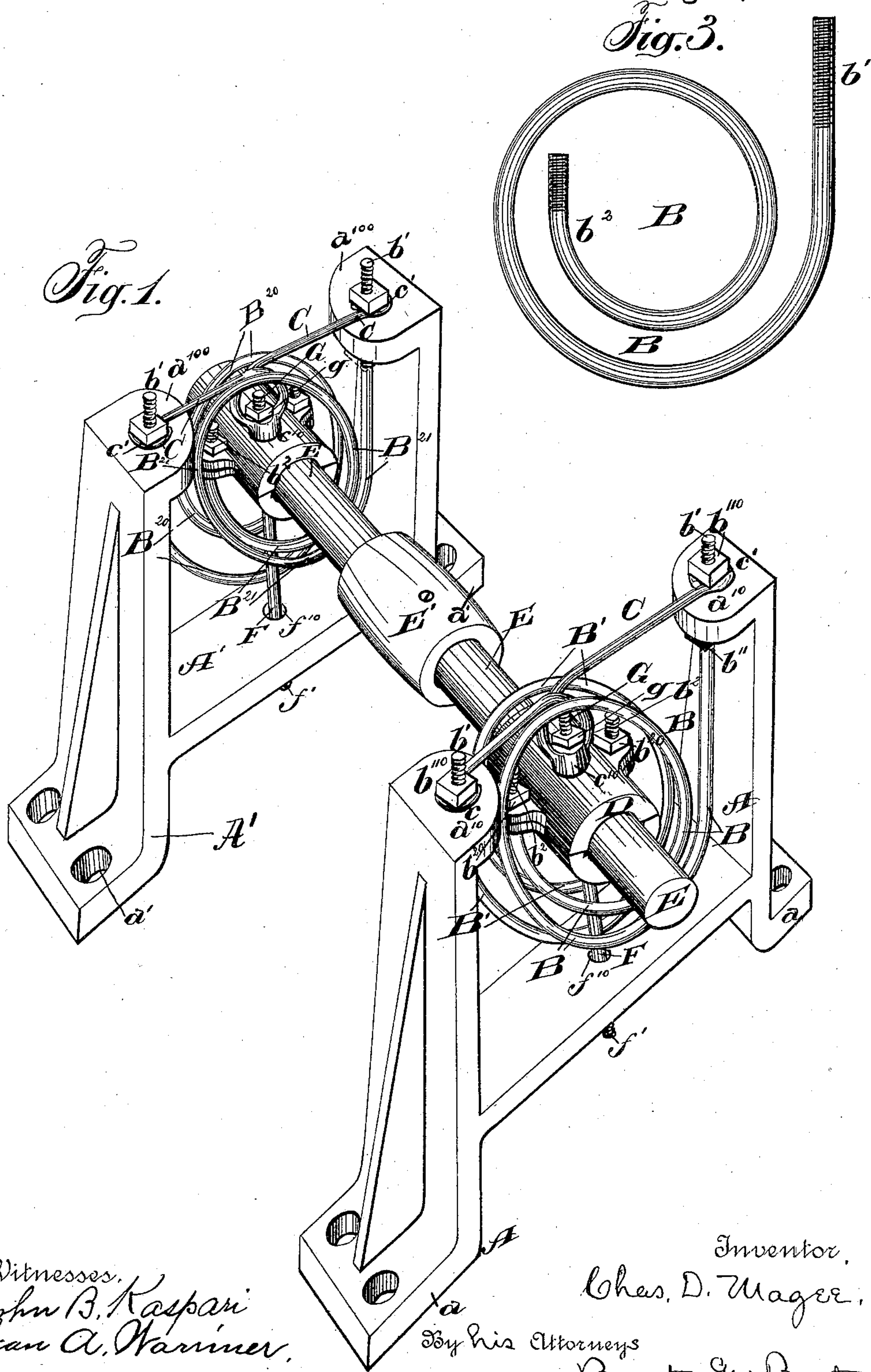
(No Model.)

2 Sheets—Sheet 1.

C. D. MAGEE.
SHAFTING BEARING.

No. 387,238.

Patented Aug. 7, 1888.



Witnesses.
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Jean A. Harmer.

Inventor,
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By his Attorneys
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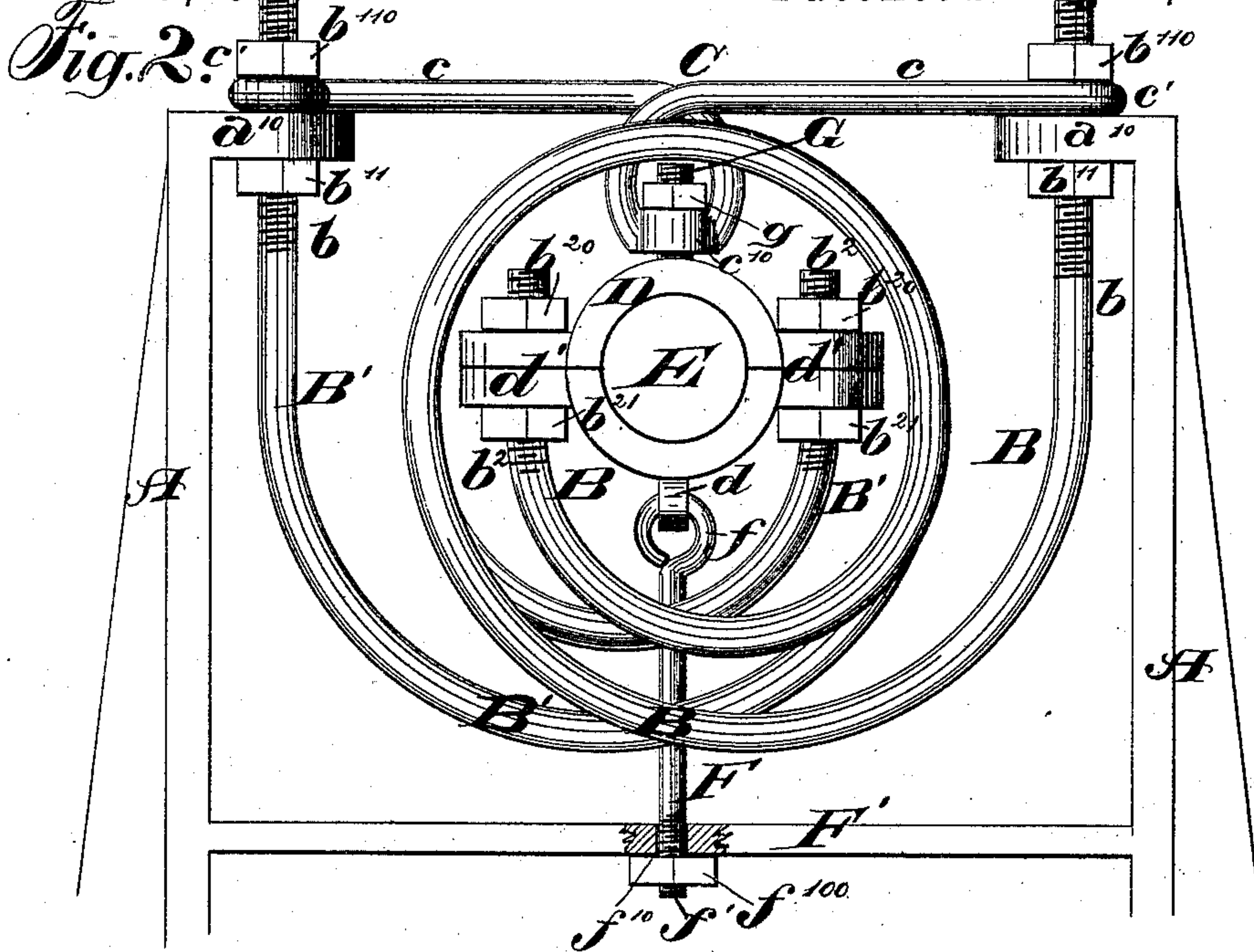


Fig. 4.

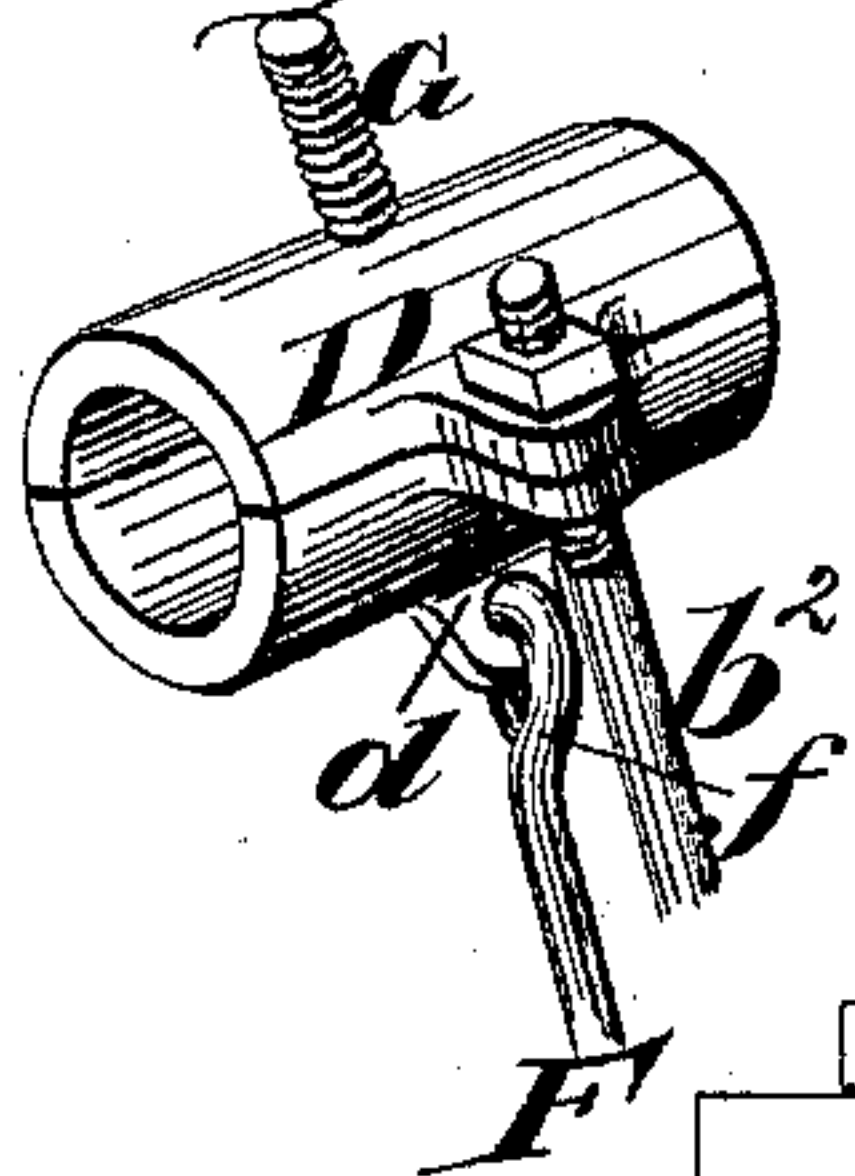
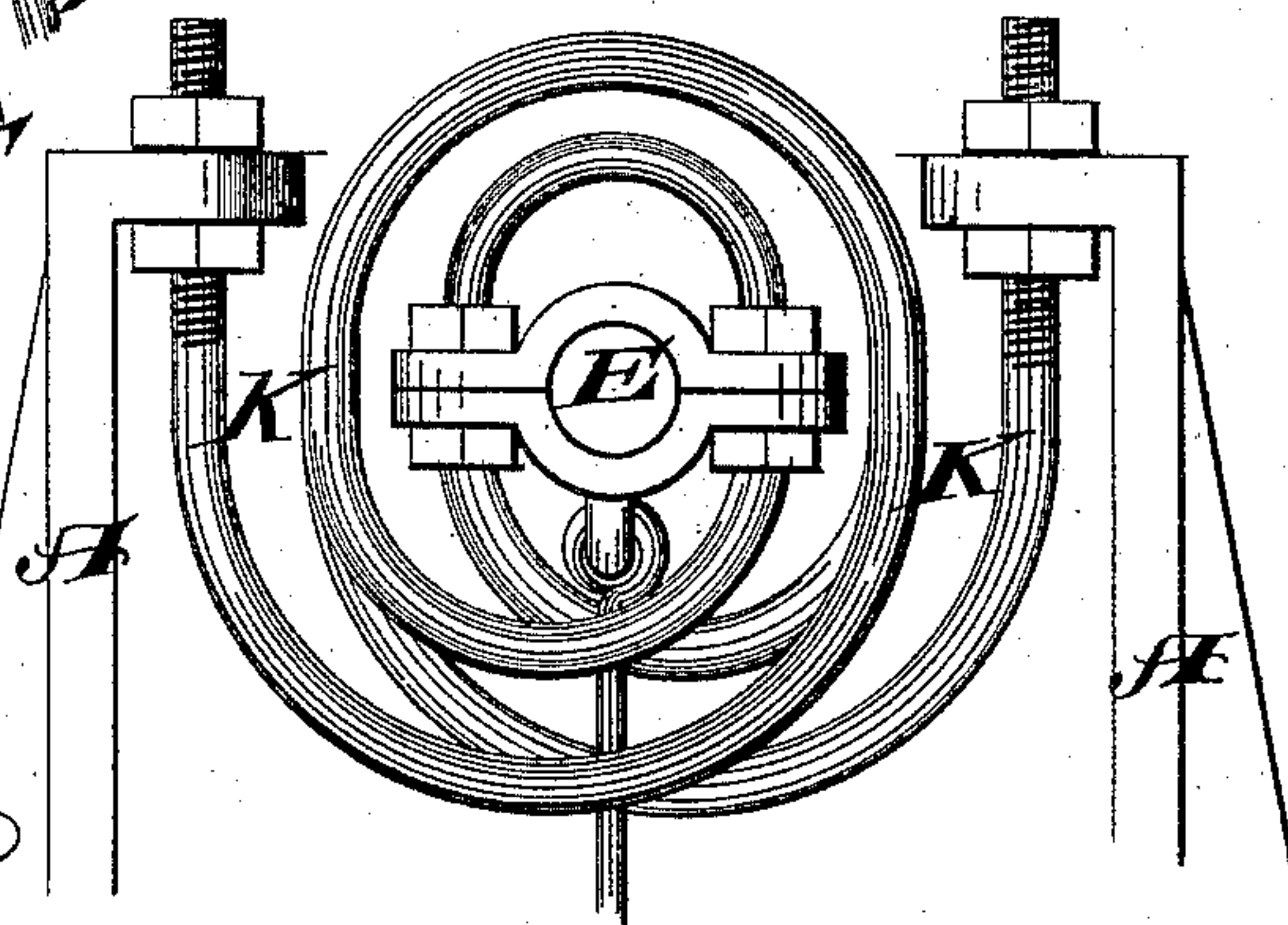


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES D. MAGEE, OF CHICAGO, ILLINOIS.

SHAFTING-BEARING.

SPECIFICATION forming part of Letters Patent No. 387,238, dated August 7, 1888.

Application filed August 18, 1887. Serial No. 247,323. (No model.)

To all whom it may concern:

Be it known that I, CHARLES D. MAGEE, a citizen of the United States, residing at Chicago, Cook county, State of Illinois, have invented certain new and useful Improvements in Yielding Shafting-Bearings, which are set forth in the following specification, reference being had to the accompanying drawings, forming a part thereof.

10 In the drawings, Figure 1 is a perspective view of my device. Fig. 2 is an end elevation of same; Fig. 3, a detail of the spring B; Fig. 4, a detail of the journal-box D; Fig. 5, a modification of my device.

15 A A' are supporting-frames or supports, within which the shafting E is supported by means of the coiled springs B B', secured at their outer ends to the lugs a^{10} a^{100} of the frames A A' by the nuts b^{11} b^{110} and at their inner ends 20 to the journal-box D by passing through the lugs d' and being secured by the nuts b^{20} b^{21} . Each of these springs passes entirely around the shaft and journal-box, and is secured to the box at the side opposite to the one at which 25 it is secured to the frames. By the nuts b^{20} b^{21} and b^{11} b^{110} the tension of the springs may be increased or diminished, according to the strain which is to be put upon the shaft by the class of work to be done.

30 In Fig. 5 is shown a modification in which the supporting-springs K K are formed of one piece, which is passed up through one of the lugs d' , over the journal-box D, down through the other lug d' , then coiled, and the ends secured to the lugs a^{10} a^{100} , the parts remaining 35 within the lugs d' d' being secured therein by the nuts b^{20} b^{21} .

F is a stay-bolt attached to the journal-box by the hook f , passing through an eye in the 40 lug d and passed through the hole f^{10} in the cross-bar F' of the frame, and is provided with the nut f^{100} at its lower end. The hole f^{10} is larger than the bolt F, so that the bolt does not cramp the lateral yielding of the bearing. 45 The bolt is rendered adjustable by the nut f^{100} , and so not only prevents the journal-box from jumping when relieved of pressure and adds steadiness to the device, but assists in the accuracy of the adjustment of the bearing. A 50 supplemental spring, C, may also be used in some instances, having its ends fastened to the

upper sides of the lugs a^{10} a^{100} . It may also be formed with a loop at or near its center, as in Fig. 2, giving it additional elasticity. It has a hole, c^{10} , at a point directly over the journal- 55 box, through which the bolt G passes, whose lower end is attached to the journal-box, and which is adjustable by the nut g . Thus in the manner described I hold the shafting in a yielding coil of springs of equal tension at all 60 points, by means of which all shock and jar are taken away from the shafting or any machinery attached thereto and borne by the springs. The value and importance of the accomplishment of this object will be clearly 65 seen when grinding or polishing wheels—as emery-wheels—are operated by the shaft. Heretofore when such wheels have been attached to shafting journaled in rigid bearings the centrifugal force of such rapidly-revolving 70 wheels has caused them to burst, especially when they are unevenly balanced, and a greater part of the loss of life and limb caused by such wheels has been due to the fact that their bearings were unyielding, and so the greater portion of the strain caused by the uneven balancing of the wheel was felt by the wheel itself. 75 My invention has overcome this difficulty, for experiment has shown that when a wheel is out of true, even as much as one-eighth of an 80 inch, its centrifugal force forces it to the center of its yielding suspension and the pressure upon it by the operator keeps it there, leaving the surface steady and even, thereby lessening the wear of the wheel, the danger to the 85 workman, and bettering the quality of the work done.

I claim—

1. A yielding shafting-bearing comprising a journal-box and coiled springs encircling the 90 shaft and secured to the journal-box, and whose outer ends are secured to a fixed support, substantially as and for the purpose set forth.

2. A yielding shafting-bearing comprising a journal-box and coiled springs encircling the 95 shaft and secured to the journal-box, and whose outer ends are adjustably secured to a fixed support, substantially as and for the purpose set forth.

3. A yielding shafting-bearing comprising a 100 journal-box and coiled springs encircling the shaft, secured at their inner ends to the jour-

nal-box and at their outer ends to a fixed support, substantially as and for the purpose set forth.

4. A yielding shafting-bearing comprising a
5 journal-box and coiled springs encircling the shaft, secured at their inner ends to the journal-box and at their outer ends to a fixed support, the said securement at each end being adjustable, whereby the tension of the springs
10 may be increased or diminished, substantially as and for the purpose set forth.

5. In a yielding shafting-bearing, the combination, with the journal-box and coiled springs encircling the shaft, of a spring, C, secured at
15 its ends to a fixed support and at or near its middle point connected adjustably to the journal-box, substantially as and for the purpose set forth.

6. In a yielding shafting-bearing, the combination, with the journal-box, coiled springs encircling the shaft, and the cross-bar F', of the stay-bolt F, connected at one end to the journal-box and at the other end connected adjustably to the cross-bar F', substantially as
25 and for the purpose set forth.

7. A yielding shafting-bearing comprising, in combination, a journal-box, coiled springs encircling the shaft, secured at their inner ends to the journal-box and at their outer ends to a fixed support, the spring C, secured at its
30 ends to the said fixed support and at or near its center connected adjustably to the journal-box, and the stay-bolt F, connected at one end to the journal-box on the side opposite the spring C and connected adjustably at the other
35 end to the cross-bar F', substantially as and for the purpose set forth.

8. A yielding shafting-bearing comprising, in combination, a journal-box and two coiled springs, C, both formed of one piece, which
40 encircles the shaft and is secured to the journal-box and at its outer ends to a fixed support, substantially as set forth.

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