

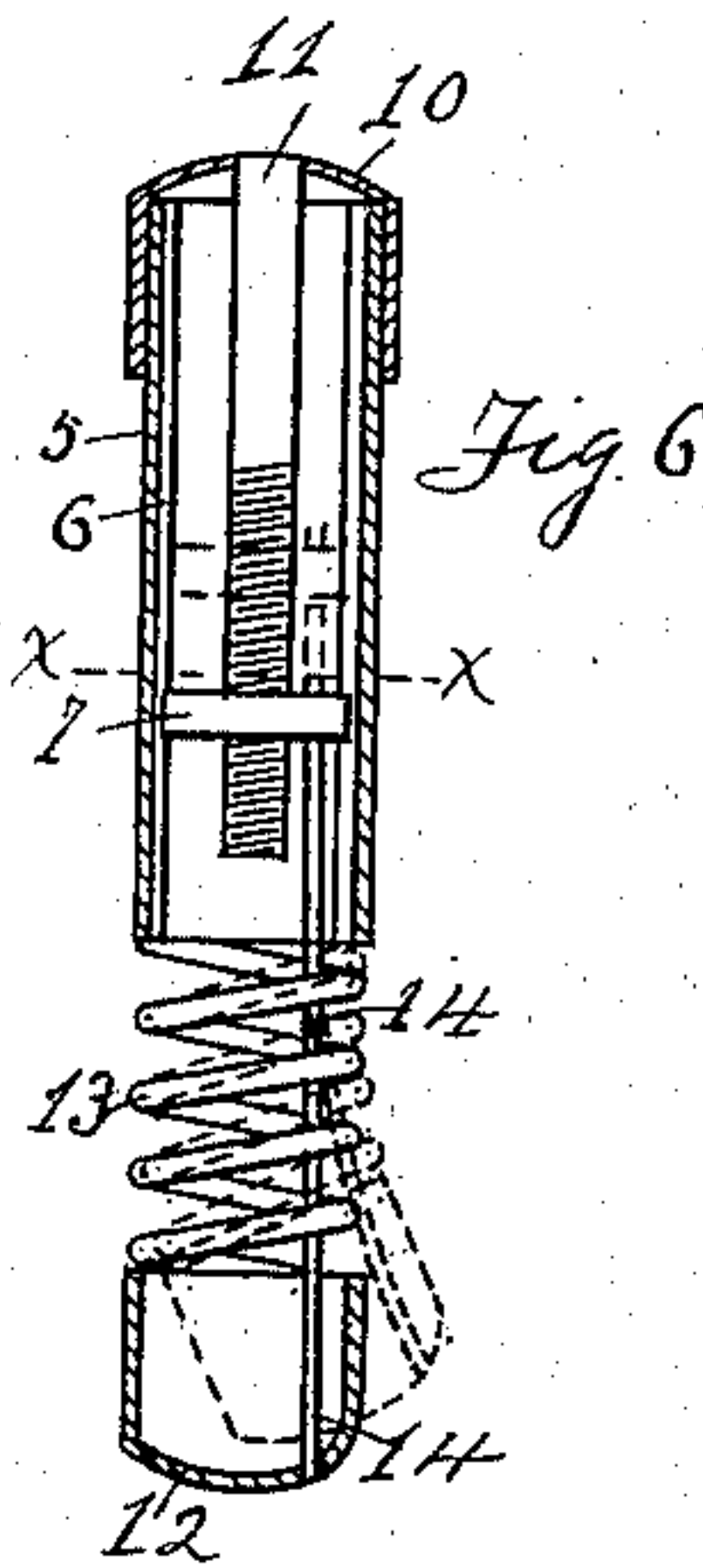
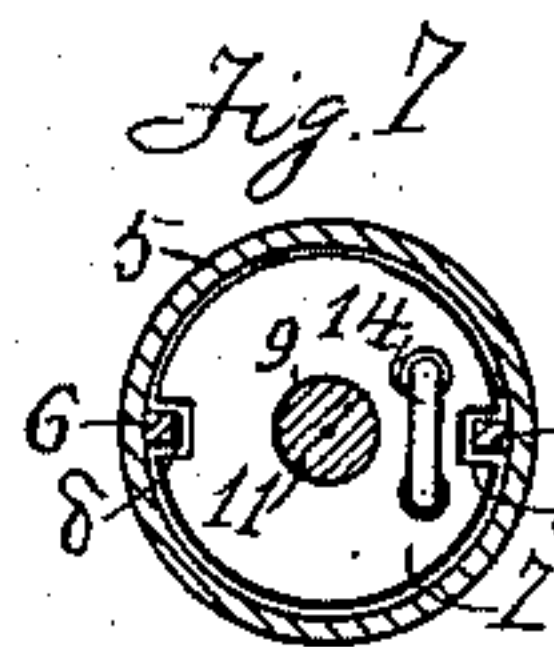
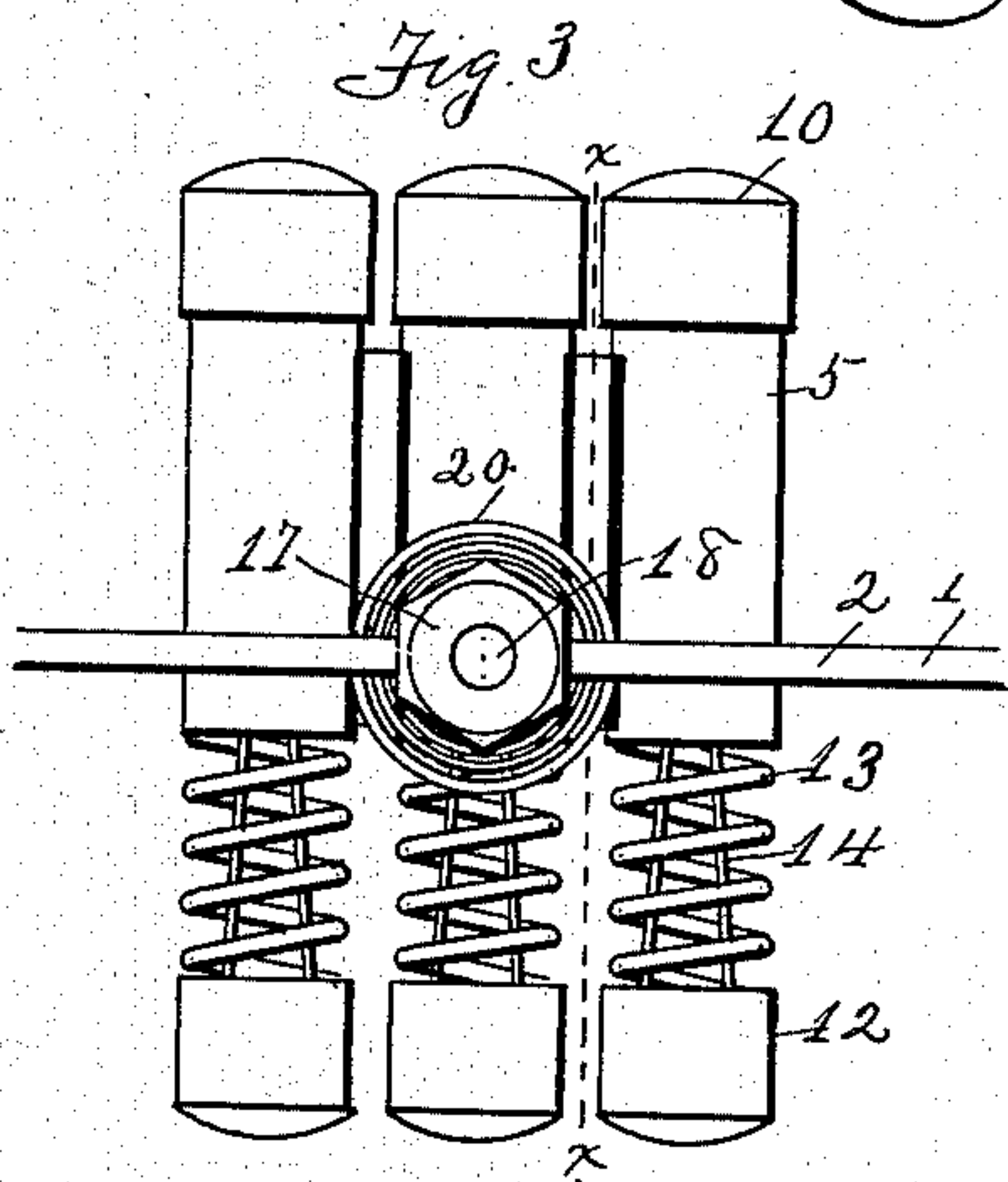
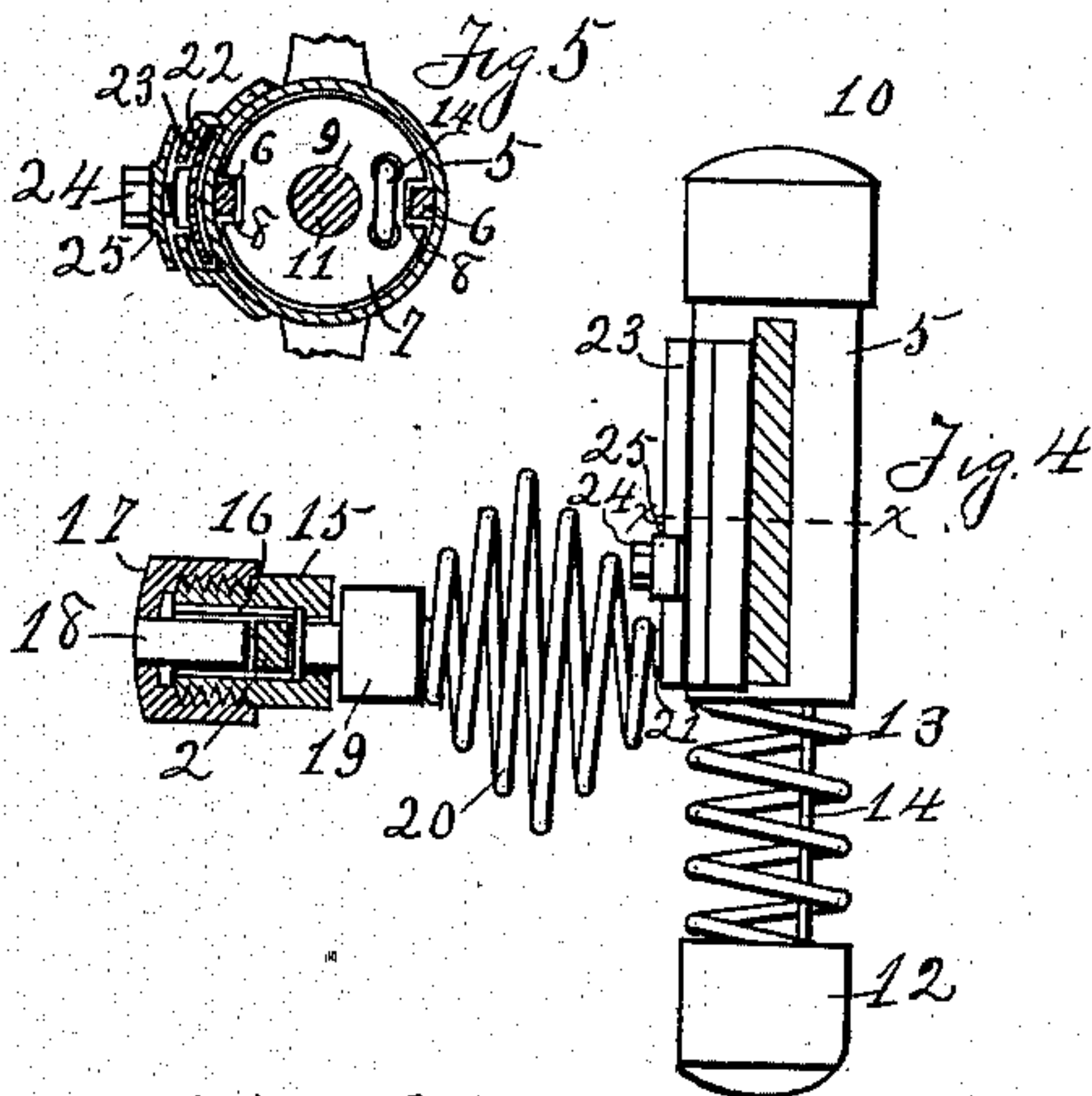
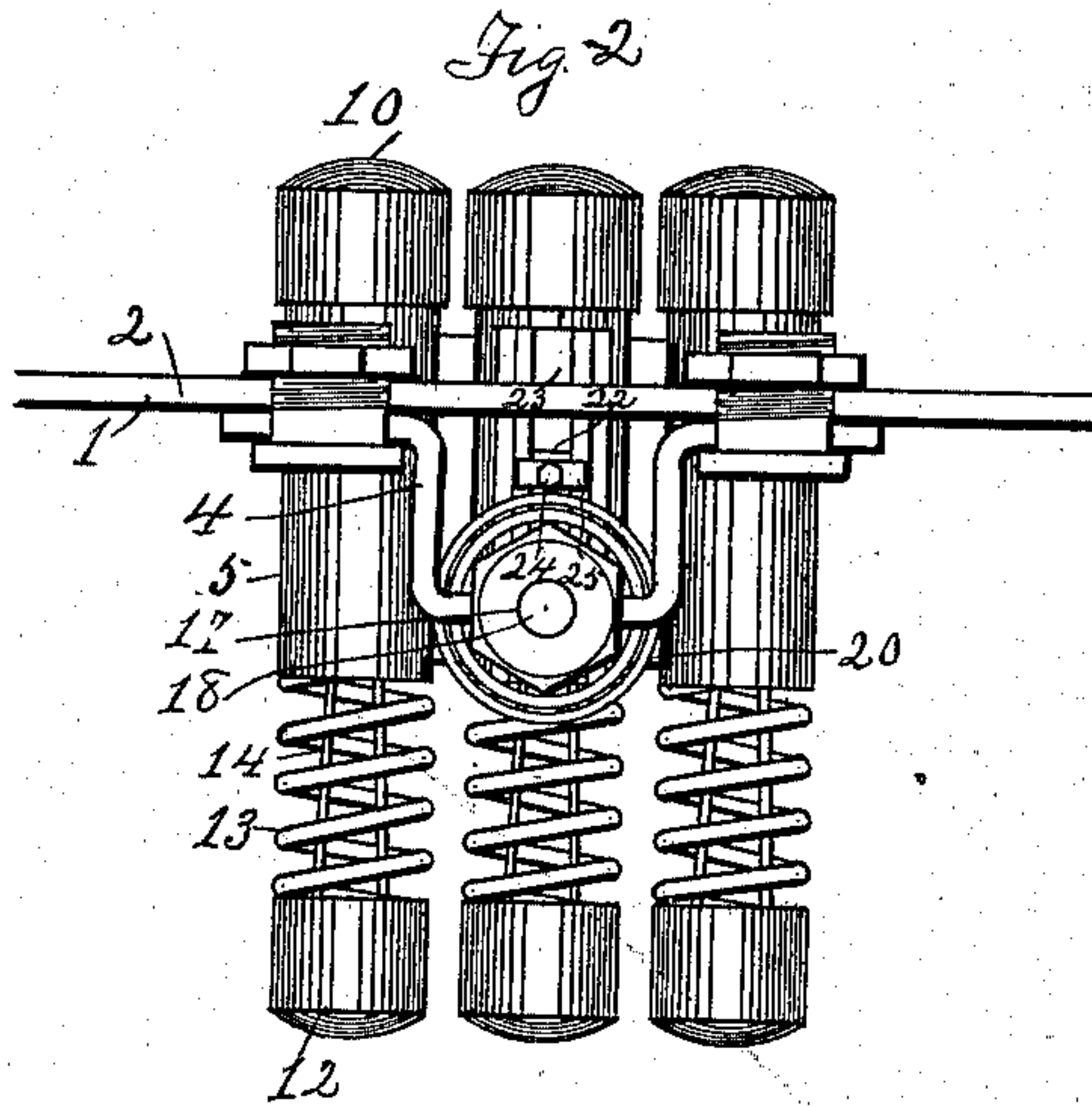
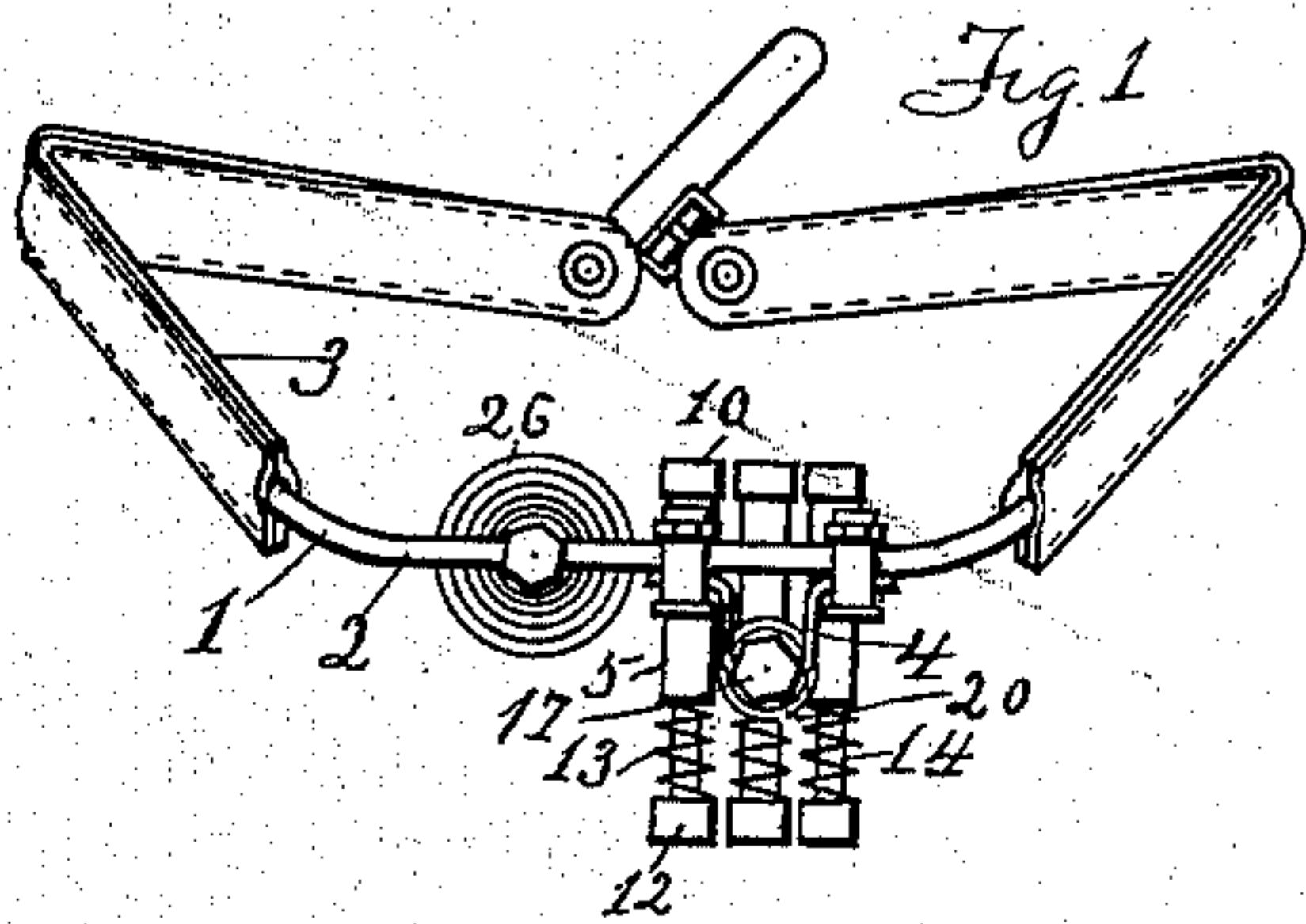
No. 714,305.

Patented Nov. 25, 1902.

G. R. HOUSE.  
HERNIAL TRUSS.

(Application filed Mar. 5, 1901.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

GEORGE R. HOUSE, OF KANSAS CITY, MISSOURI.

## HERNIAL TRUSS.

SPECIFICATION forming part of Letters Patent No. 714,305, dated November 25, 1902.

Application filed March 5, 1901. Serial No. 49,789. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE R. HOUSE, a citizen of the United States, residing at Kansas City, in the county of Jackson, in the State of Missouri, have invented certain new and useful Improvements in Trusses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in trusses.

It is recognized that the fingers of the human hand are the most effectual instrumentality for pressing back and retaining the hernia and that by flection of the fingers and pressing the points or tips of the fingers upon the abdominal wall at a point immediately below the break or aperture through which the hernia protrudes and thence pressing the fingers over and upon the hernia it may be restored to and retained in its proper cavity with greater facility and with greater comfort to the person and with less interference with and danger of enlarging the aperture and at the same time giving better opportunity for the healing of the broken membrane.

One of the objects of this invention is to provide a pad for a truss which shall by its flection have substantially the same action and be capable of producing substantially the same effect as the fingers of the human hand in reducing and retaining the hernia.

A further object of this invention is to provide a construction by which the pad may be applied when the hernia appears low down—that is, at the lowest or third inguinal ring. It has heretofore been found difficult, if not impossible, to satisfactorily fit a pad when the hernia appears in such a position; but by the arrangement and construction of this invention this difficulty is overcome; and to effect this and other objects that will appear my invention consists in certain features of novelty hereinafter described, and pointed out in the claims.

Figure 1 represents a diagrammatic view of a truss embodying my invention. Fig. 2 represents an elevation of my improved truss-pad mounted upon a yoke secured upon the body-band. Fig. 3 represents a similar view in which the pad is mounted directly upon

the body-band. Fig. 4 represents a detail side view showing the means by which the pad is connected with and mounted upon the body-band. The view is taken substantially upon the line *xx* of Fig. 3. Fig. 5 represents a cross-section on the line *xx* of Fig. 4. Fig. 6 represents a vertical section of one of the fingers, showing the means by which flection of the tip is secured. Fig. 7 represents a cross-section on the line *xx* of Fig. 6.

Similar numerals refer to similar parts throughout the several views.

1 represents a body-band, preferably a metallic spring of ordinary construction and adapted to be bent to conform to the form of the wearer and having an anterior straight portion 2. Said band may be partly covered with a sheath 3, of soft leather or like material, making it move comfortably to the wearer. Upon said anterior straight portion of said band is secured a yoke 4, whereby the pad may be mounted in such manner as to be applied when the hernia appears low down or at the lowest or third inguinal ring, to do which by mounting the pad upon the body-band itself would be difficult, if not impossible. Upon said yoke, as shown in Fig. 2, or upon the body-band, as shown in Fig. 3, is mounted a truss-pad. This pad is of a peculiar construction to give it the flexing action of the fingers of the human hand and consists of one or more fingers, each finger consisting of a tube or barrel 5, having on its inner side guides 6. Within said tube is mounted a disk 7, having peripheral recesses 8, adapting it to travel on the guides 6, and provided with a central threaded opening 9. Upon said tube is mounted a cap 10, adapted to turn thereon and carrying a threaded stem 11, arranged to engage the threaded opening in said disk 7 and by which said disk is operated. A tip 12 is flexibly connected, preferably by a coiled spring 13, with said tube 5, and a flexible connecting-link 14 connects said tip with said disk 7 near that side of the finger next the body of the wearer. By turning the stem 11 the disk 7 is drawn up and through the link 14 compresses the spring 13; but by reason of the arrangement of said link near one side of the finger the tip 12 is drawn in toward the body, as shown in dotted lines in Fig. 6, and the truss being applied



said tip will bear against the abdominal wall below the hernial aperture, while that part of the finger above the tip will be seated against the hernia and hold it in its proper place without danger of enlargement of the aperture or interference with the process of healing. Said pad is connected with the body-band, as shown in Fig. 4, in which 15 represents a coupling provided with a longitudinal slot 16 to receive the body-band, and on the coupling is mounted a screw-threaded cap 17, carrying a stud 18, adapted to bear upon the body-band and clamp the coupling thereon when the cap is screwed down. A 15 connected bar 19 is swiveled to the coupling, and a spiral spring 20 is connected at one end to said connecting-bar and at its other end to a boss 21 upon a plate 22, seated in a guideway 23, mounted on one of the fingers of the 20 pad. Said plate 22 is adjustable in said guideway, and when adjusted is secured and fixed therein by a set-screw 24, passing through an exterior plate 25 and engaging a boss on plate 22, whereby said plates are clamped upon the 25 bridge of the guideway, and thus is obtained a vertical adjustment of the pad with reference to the body-band, which is very desirable to the exact fitting of the truss to the hernia. The duplex coil-spring shown in Fig. 30 4, consisting of the oppositely-disposed cone-shaped integrally-formed spirals, is preferably used in this relation, for the reason that the coils of different radii diverging from a common center will permit telescoping of the 35 spirals and produce a more effective and sensitive resiliency and enable the pad to come closer to the band.

Having thus fully described my improvement, what I claim as my invention, and desire to secure by Letters Patent, is—

1. A truss-pad consisting of a series of fingers provided with separable resilient tips each having an adjustable, flexible device connected with the body of said fingers, substantially as described. 45

2. A truss-pad, consisting of a series of fingers having resilient tips and flexible links connecting said tips with the body of said fingers, and controlling the flexion of the fingers, 50 substantially as described.

3. A truss-pad, consisting of a series of flexi-

ble fingers and flexible links connected with and controlling the flexion of the fingers, substantially as described.

4. A truss-pad, comprising a series of fingers, each finger consisting of a tube, provided with interior guides, a disk arranged to travel on said guide, a cap mounted upon said tube provided with a stem, connected with and arranged to operate said disk, a tip having a flexible connection with said tube, and a link connecting said disk and said tip for flexing the finger, substantially as set forth. 60

5. In a truss-pad, a finger consisting of a tube provided with interior guides, a disk arranged to travel on said guides, a cap mounted upon said tube, a stem connected with said cap and engaging said disk for operating the same, a tip flexibly connected with said tube, and a link connected with said tip and with said disk for flexing the finger, substantially as set forth. 70

6. A truss comprising a body-band a clamping device connected with the band, a duplex coil-spring mounted on the clamping device 75 a boss mounted on the spring and telescoping therewith and a pad connected with the boss.

7. A truss comprising a body-band a clamping device connected with the band a duplex coil-spring rotatably connected with the 80 clamping device and a truss-pad mounted on said spring and vertically adjustable thereon with relation to said body-band.

8. A truss comprising a body-band, a yoke adjustably mounted on said body-band, a duplex coil-spring mounted on said yoke, and a truss-pad mounted on said spring and vertically adjustable thereon, with relation to said body-band, substantially as described. 85

9. A truss, comprising a body-band, a yoke adjustably mounted on said body-band, and a truss-pad yieldingly connected with said yoke and vertically adjustable thereon with relation to said body-band, said pad consisting of a series of flexible fingers and flexible 95 links connected with and controlling the flexion of the fingers, substantially as described.

GEORGE R. HOUSE.

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