

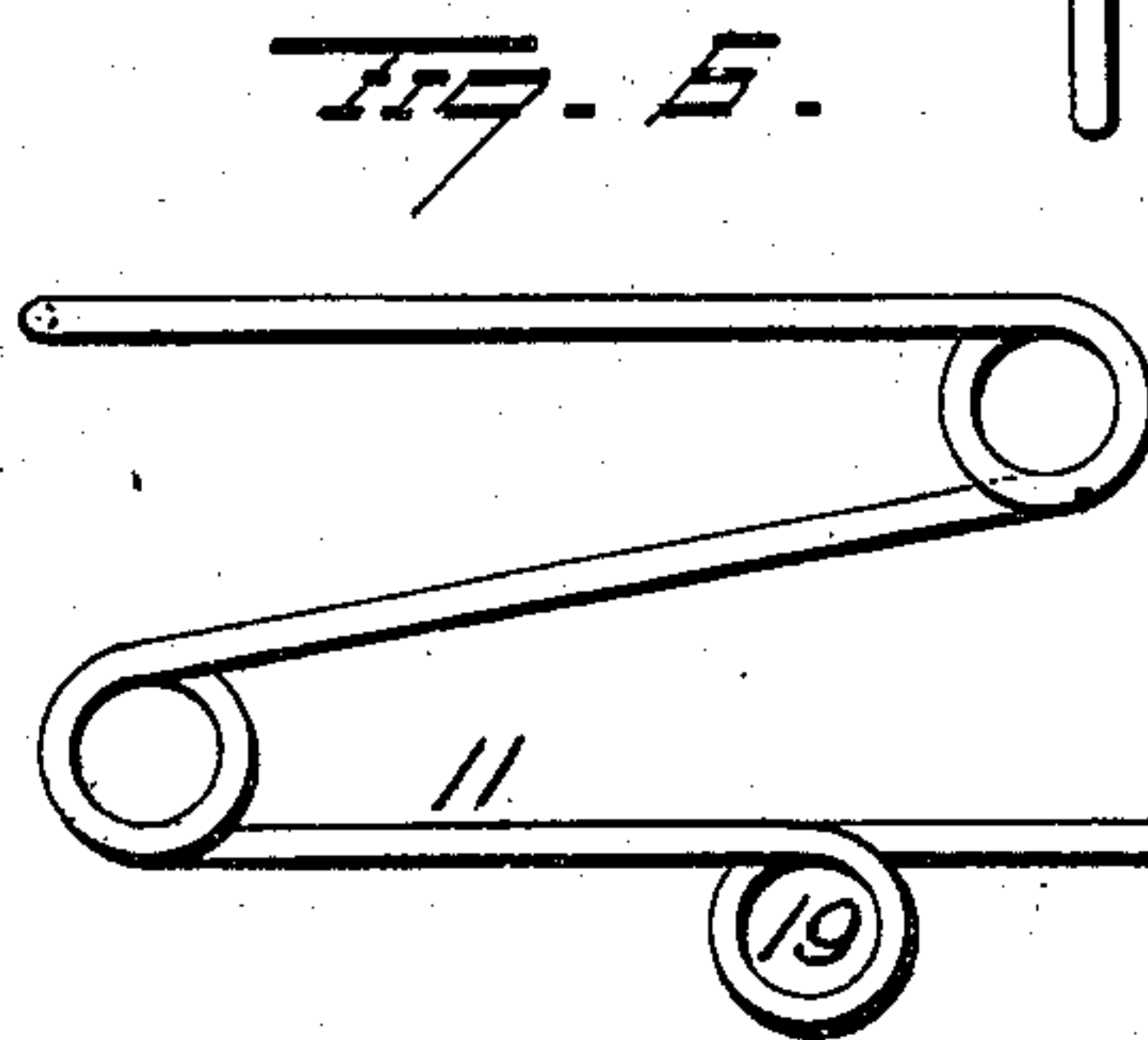
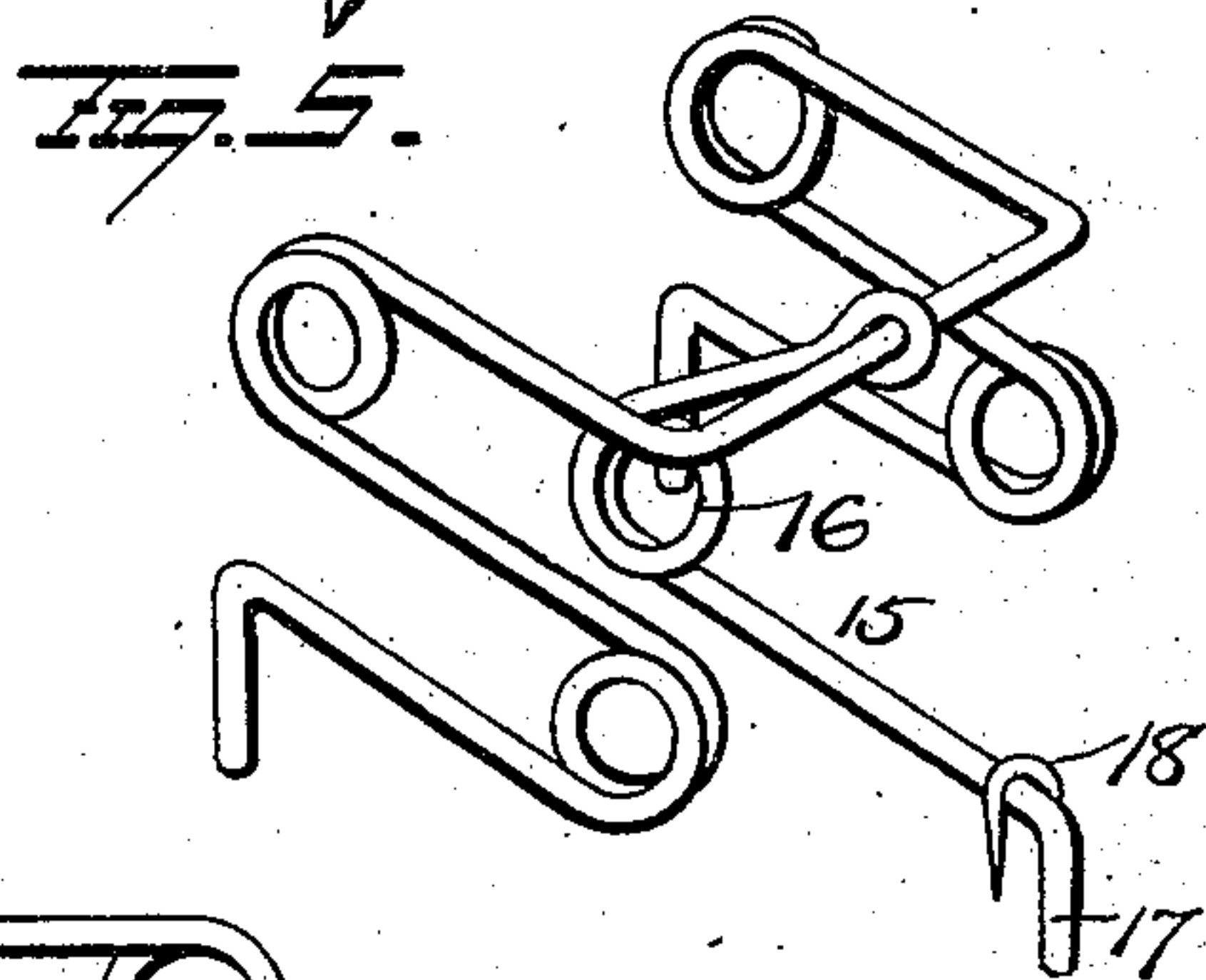
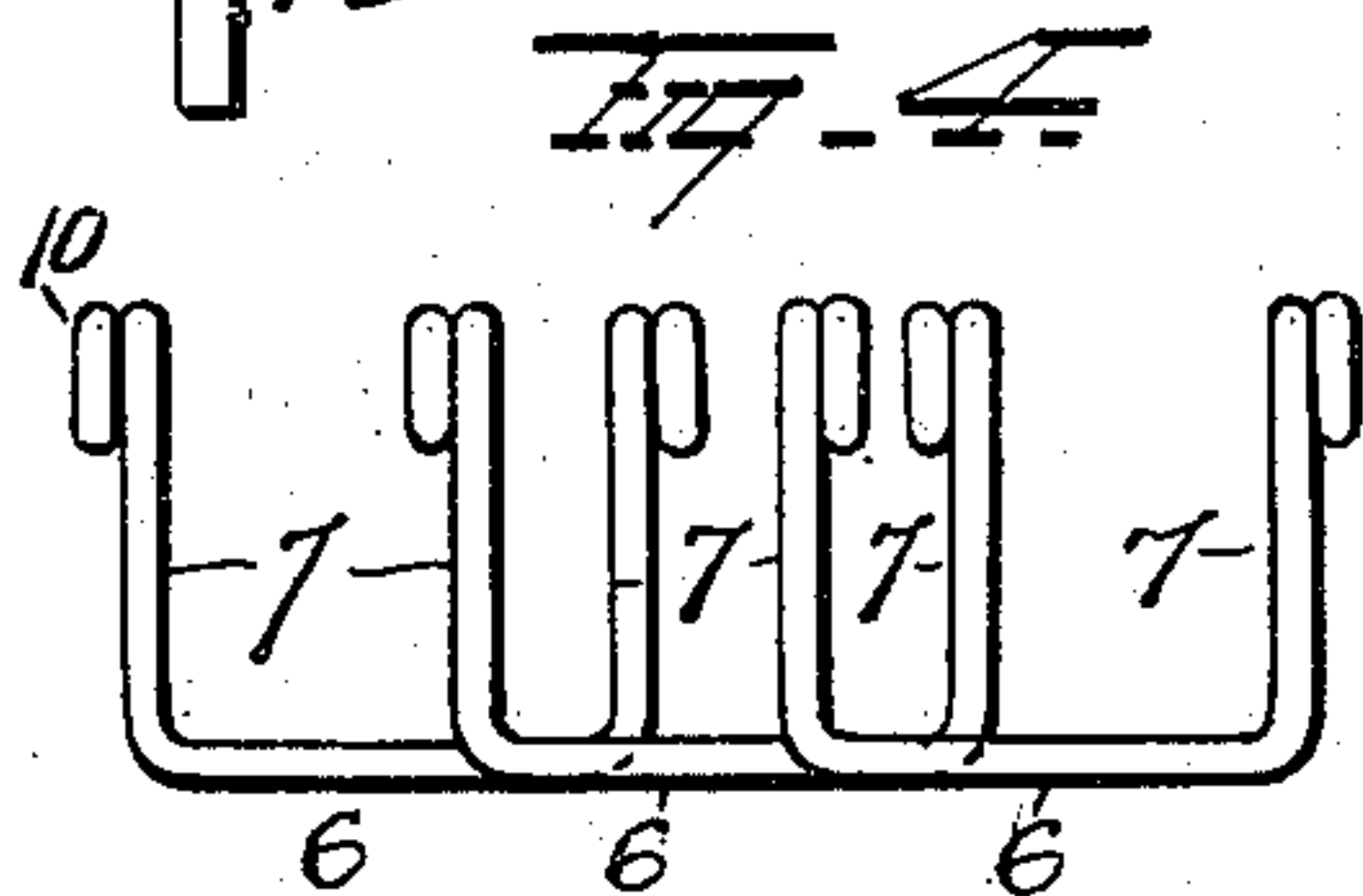
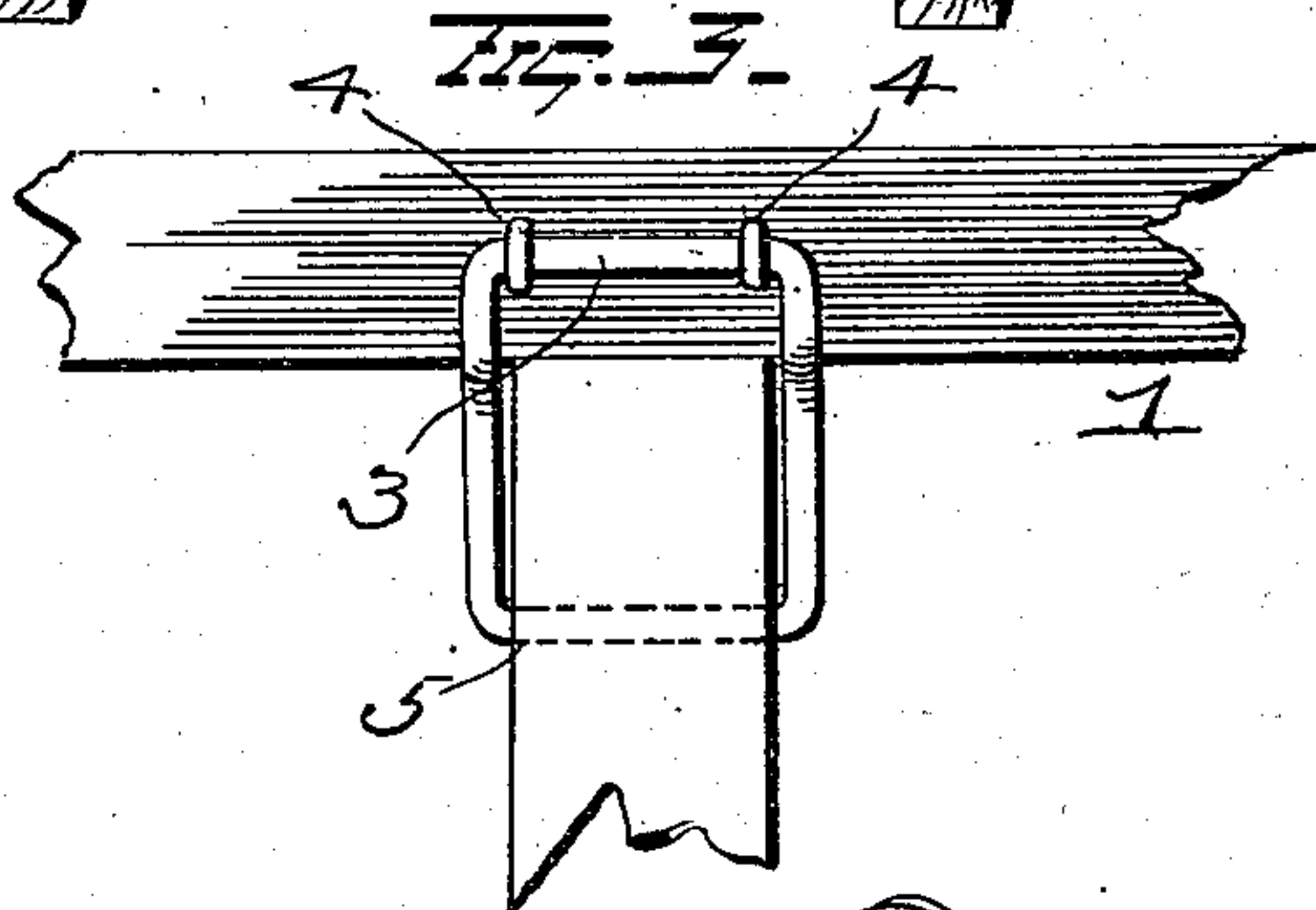
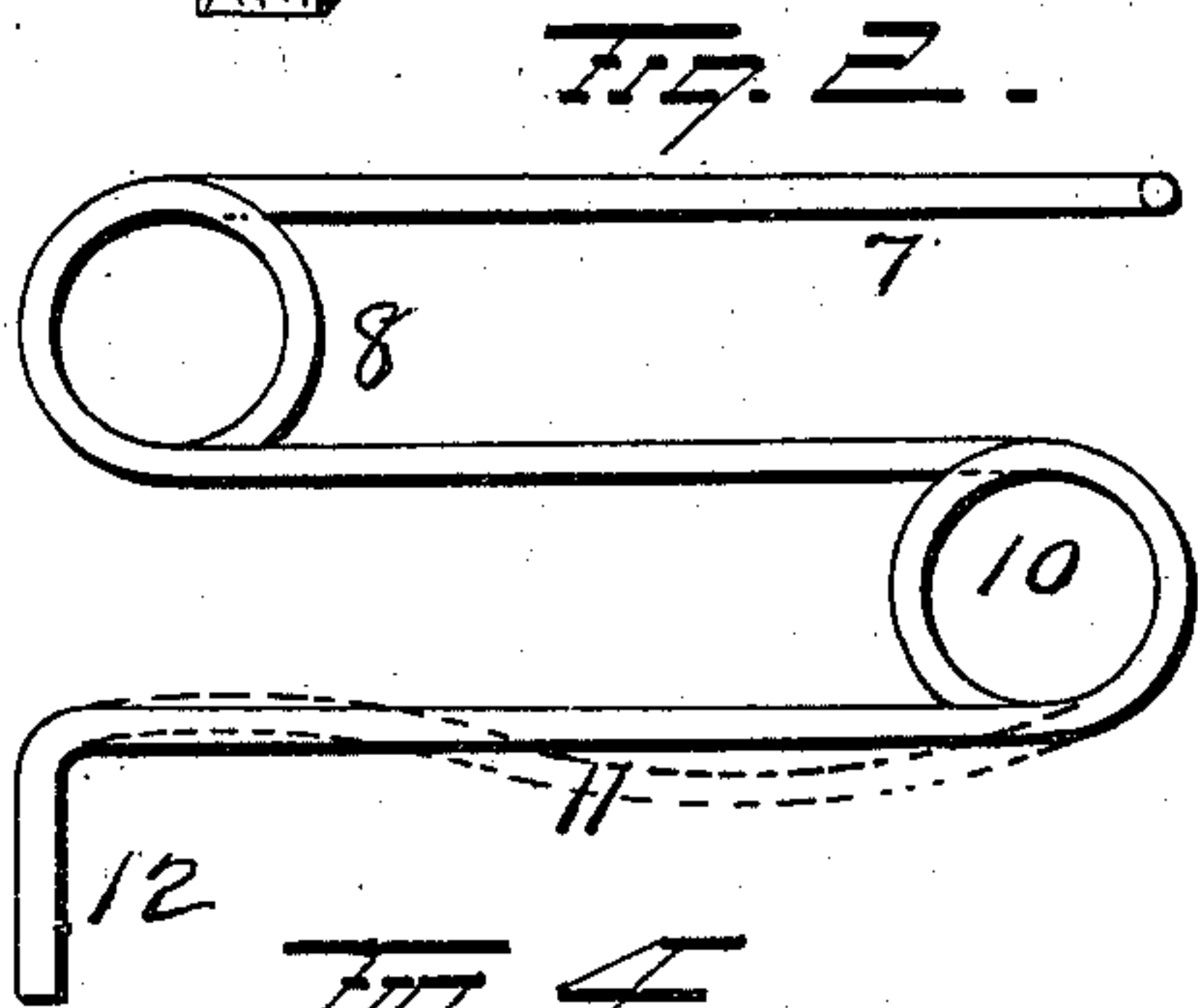
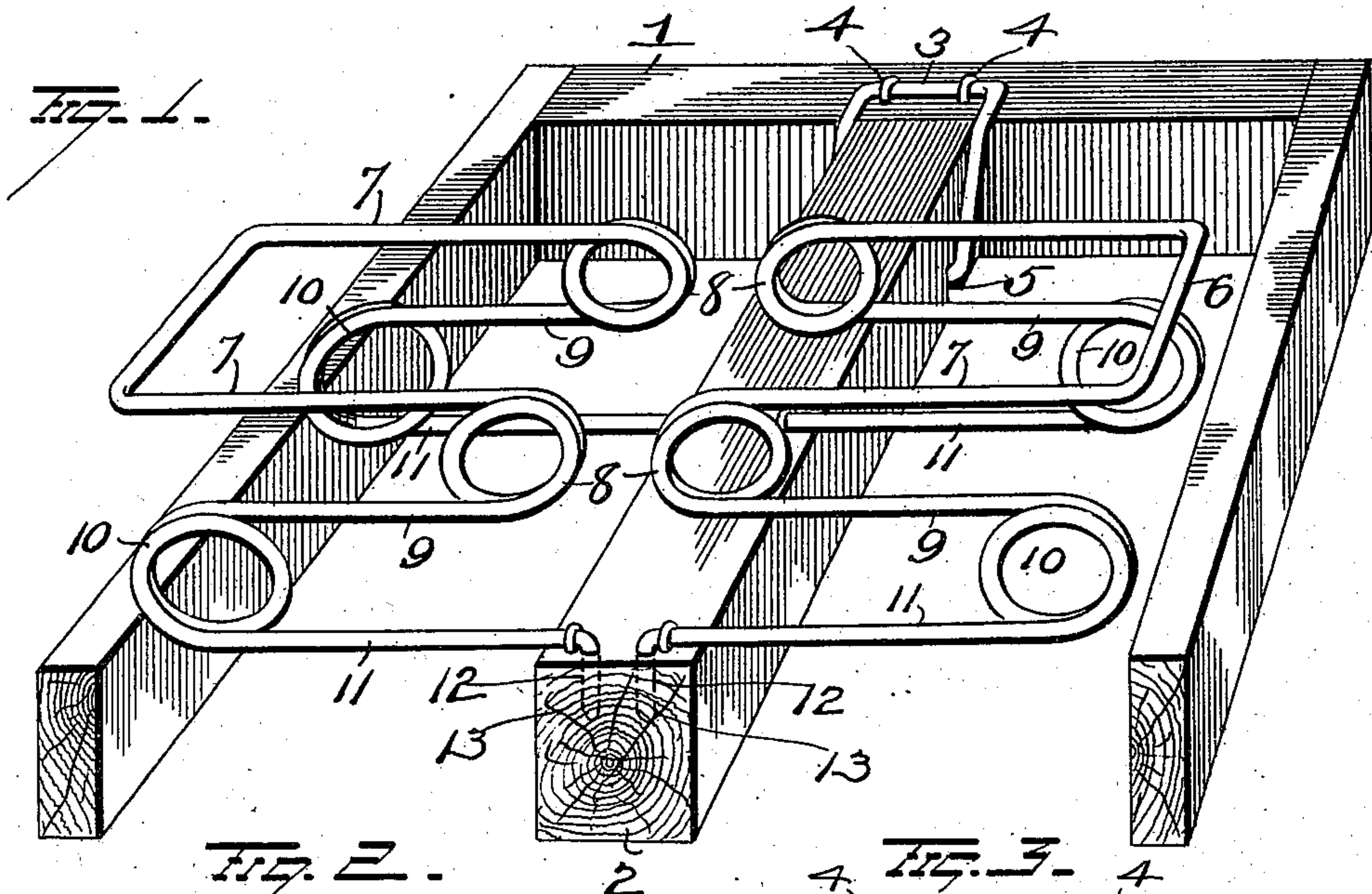
No. 723,874.

PATENTED MAR. 31, 1903.

G. H. HOWELL.  
SPRING.

APPLICATION FILED APR. 18, 1902.

NO MODEL.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

GEORGE H. HOWELL, OF SIOUX CITY, IOWA.

## SPRING.

SPECIFICATION forming part of Letters Patent No. 723,874, dated March 31, 1903.

Application filed April 18, 1902. Serial No. 103,558. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE H. HOWELL, a resident of Sioux City, in the county of Woodbury and State of Iowa, have invented certain new and useful Improvements in Springs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in springs, and more particularly to springs for sofas, lounges, chairs, and the like, the object of the invention being to provide a spring or series of springs which will dispense with the necessity for stay-rods and which will be strong and durable when in use.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view showing my improved springs secured in a sofa-frame. Fig. 2 is a detail of one of the springs. Fig. 3 is a detail view showing the means for securing the spring-containing bolster of a sofa or chair to the frame of said sofa or chair, and Figs. 4, 5, and 6 are views of modified forms of my invention.

1 represents a frame of a sofa or chair, and 2 my improved spring-supporting bolster, which is secured at each end to the frame 1 by means of supports 3. The supports 3 are composed, preferably, of a single piece of metal bent into the form of a rectangle, the upper end of the rectangle being bent, as shown, so as to rest solidly and flatly on the side rail or frame of the article of furniture and secured thereto by means of staples 4. The main portion of the loop thus formed projects sufficiently far inward to receive and retain the bolster and rest in recesses 5 therein and at the same time permit the easy removal of the bolster when desired.

It will be understood that for all ordinary purposes a single bolster will be all that is necessary; but it may be desirable to use two or more, and hence I do not wish to be limited to the use of only one bolster, as I may

use two or more, according to the width of the article.

My improved springs are composed, preferably, of a single piece of spring-wire bent between their ends to form a straight end portion 6, the ends then extending rearward, forming two parallel arms 7 7. The wires are then coiled, as shown at 8 8, and then extend forward, as shown at 9 9, parallel with and approximately in the same vertical plane as the arms 7 7. The wires are then again coiled, as shown at 10 10, and extend rearward, as shown at 11 11, parallel with and approximately in the same vertical plane as the arms 7 7 and sections 9 9 and are provided at their inner ends with downwardly-projecting arms or pins 12 12, adapted to rest and be secured in holes 13 in the bolster. Suitable staples 14 may be employed to secure the sections 11 11 to the bolster, as shown.

A series of these springs, according to the length or width of the article, are placed side by side and extend outward from each side of the bolster. If desired and the use to which the article is to be put warrants the same, these springs may be overlapped, as shown in Fig. 4, or a supporting-spring 15, as shown in Fig. 5, may be employed. This spring 15 is composed of a single piece of spring-wire coiled between its ends, as shown at 16, one end of said spring twisted or bent around the end portion 6 of the main spring and the other end bent to form a downwardly-extending arm or pin 17, adapted to be inserted in a hole provided for the purpose in the frame 1 of the article of furniture and secured therein by means of staples 18, as shown.

In Fig. 6 I have shown the spring slightly modified as to shape and the arms 10 coiled between their ends, as shown at 19.

It will be seen that with my improved spring or series of springs extending outward on each side of the bolster a most comfortable and strong article of furniture can be constructed and that the springs can be used on almost all articles of furniture employing springs, and hence I would have it understood that I do not limit myself to any particular use of said spring, but consider myself at liberty to use same in any article for which it is adapted.

Various other slight changes and alterations might be resorted to in the general form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

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

The combination with a frame comprising side and end bars and a bolster disposed centrally between and parallel with the side bars and removably secured to the end bars, of a series of horizontal springs, each secured solely at the inner end to said bolster, the free unsupported ends of said springs terminating in proximity to the side bars of the

frame, each of said springs comprising a horizontal arm secured at one end only to the bolster, and having a coil at its free end, a horizontal arm projecting inwardly from said coil and having a coil at its inner end over the bolster, said last-mentioned coil terminating in an outwardly-projecting horizontal arm, said horizontal arms disposed one above another and parallel with each other and a cross-bar connecting the free outer end of the upper horizontal arms in proximity to the side bars of the frame.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GEORGE H. HOWELL.

Witnesses:

JAMES DOUGHTY,  
G. G. STEVENS.