

No. 744,237.

PATENTED NOV. 17, 1903.

T. J. RIDGWAY & J. F. DIXON.

BED SPRING.

APPLICATION FILED JULY 31, 1902.

NO MODEL.

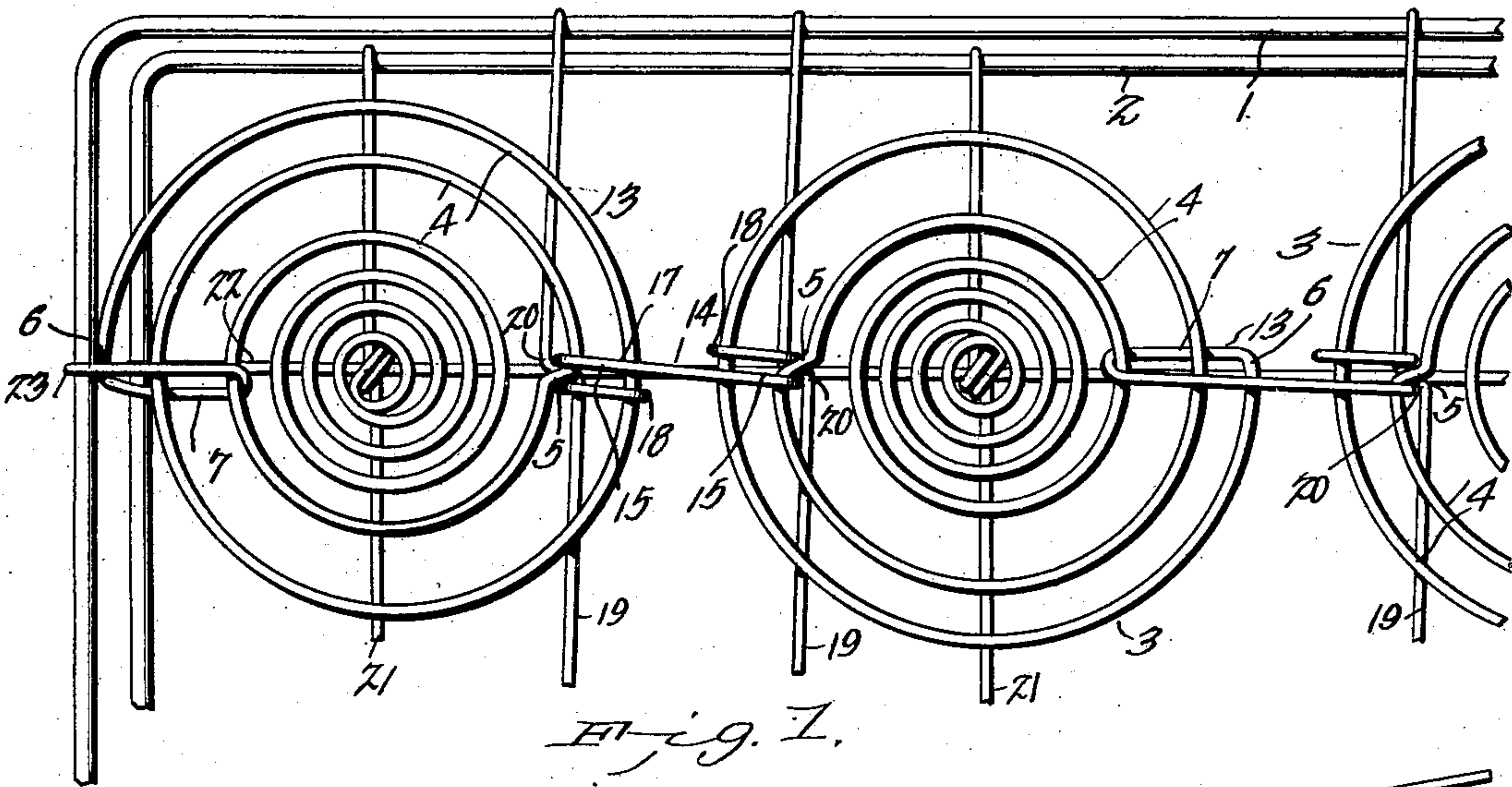


Fig. 1.

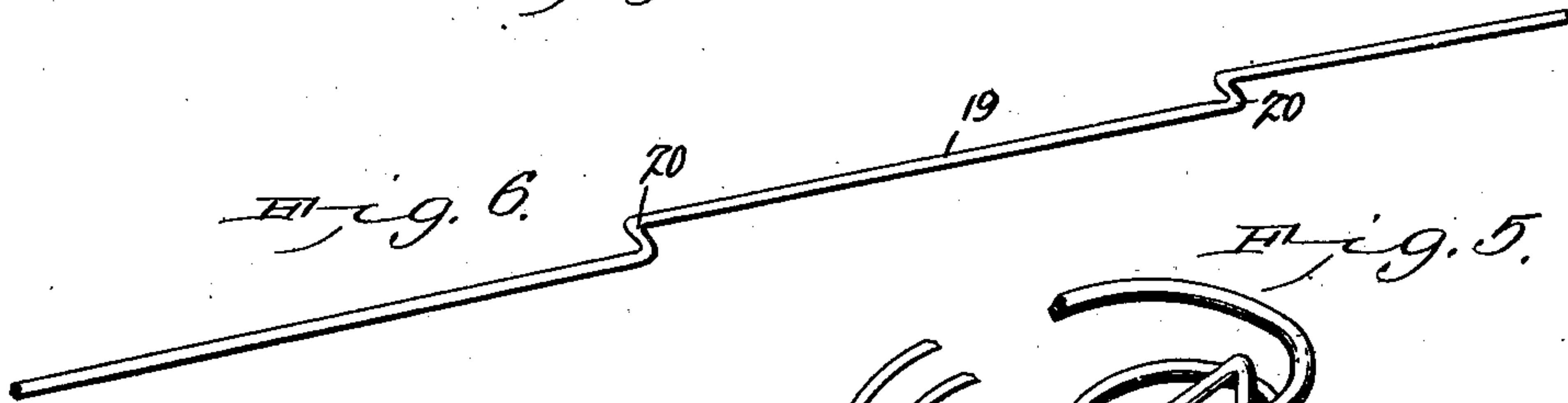


Fig. 6.

Fig. 5.

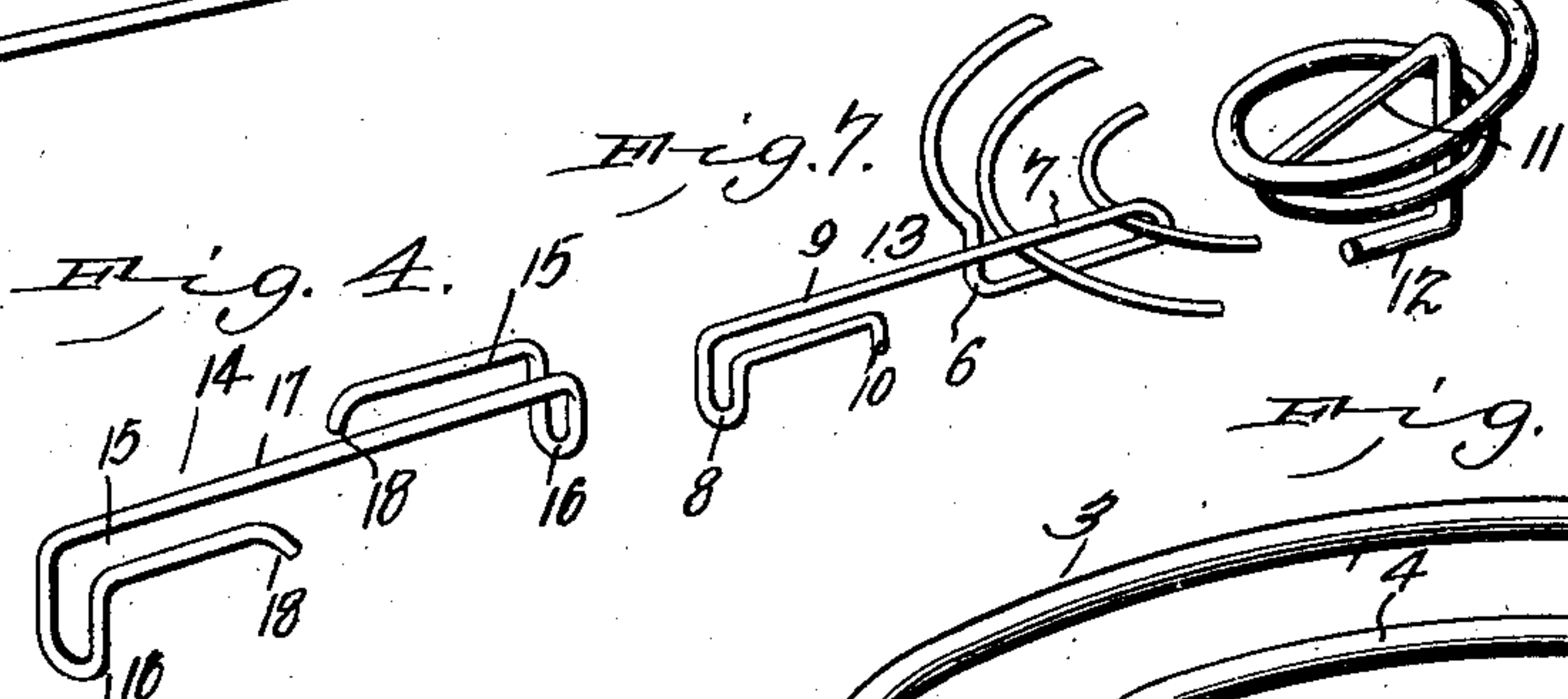


Fig. 4.

Fig. 7.

Fig. 2.

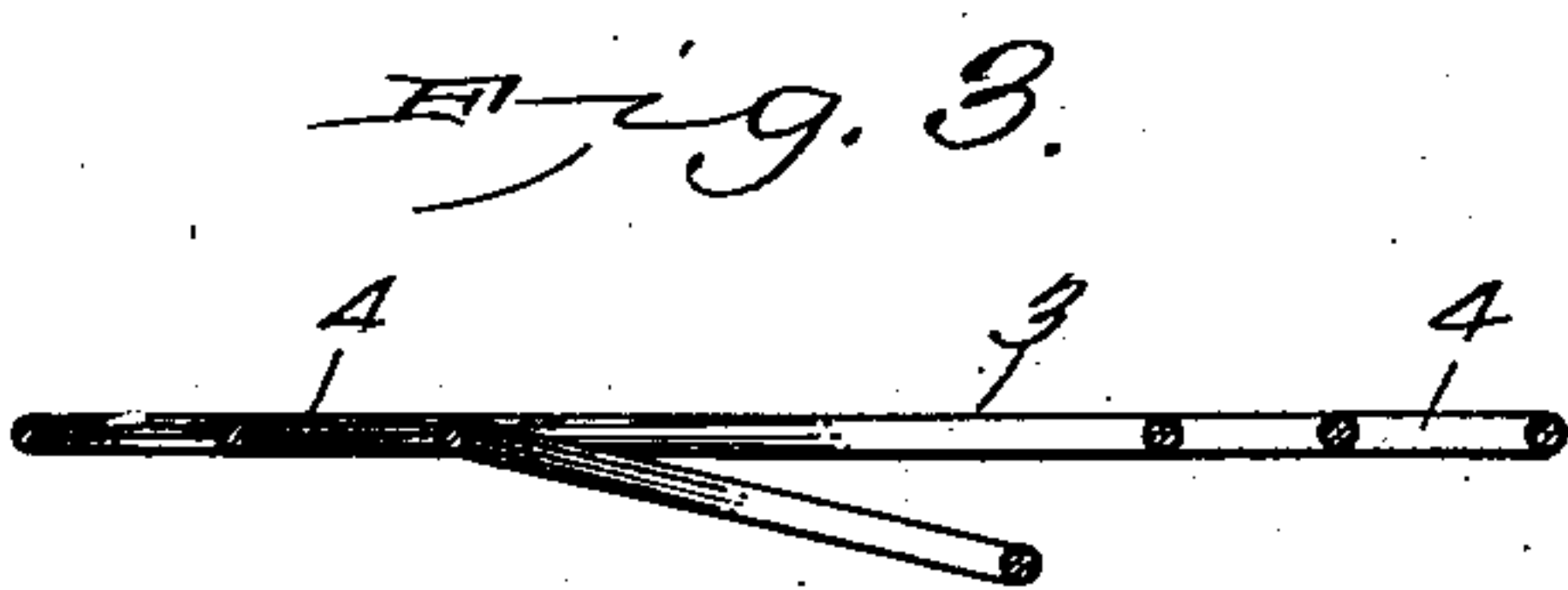


Fig. 3.

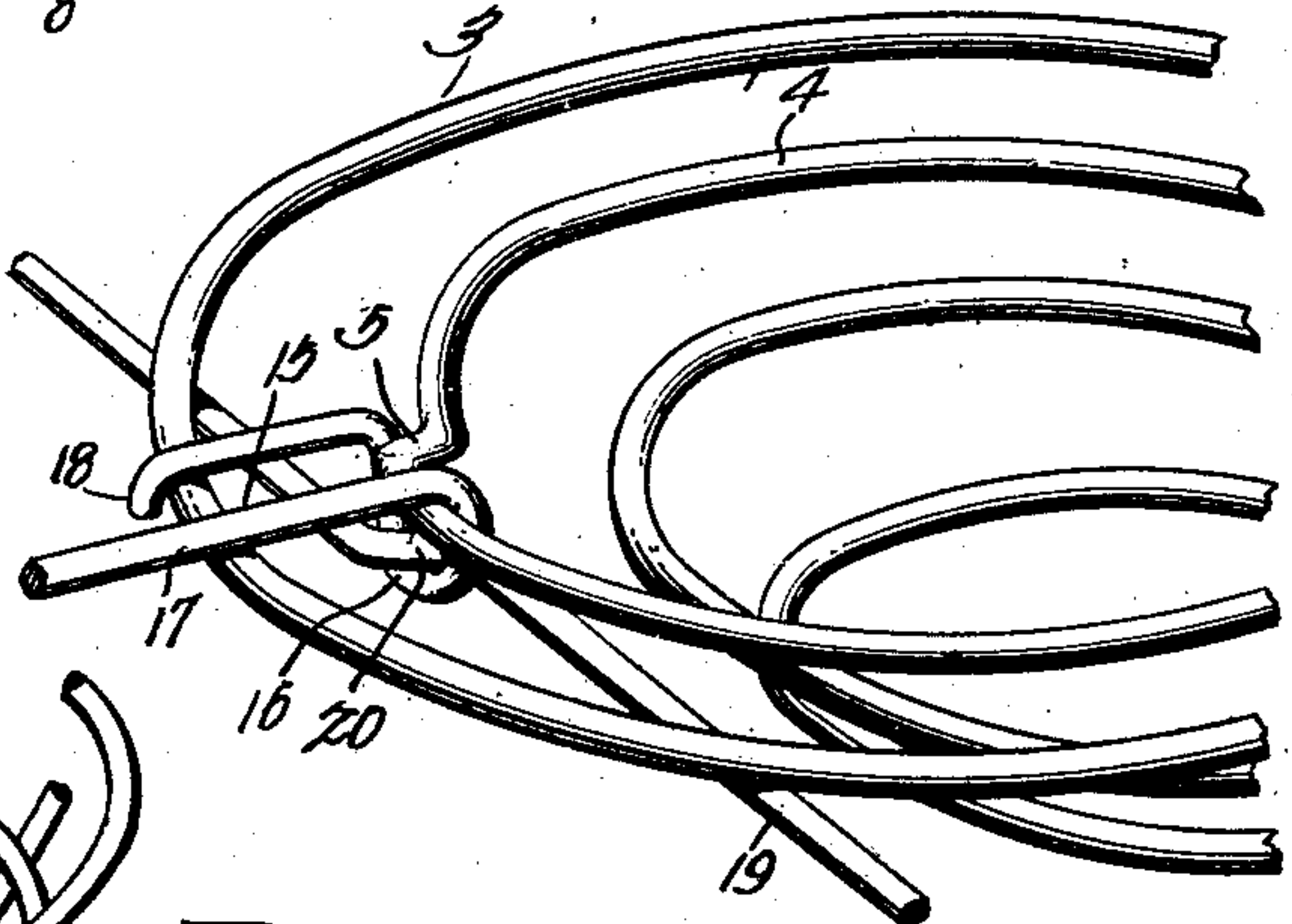


Fig. 8.

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UNITED STATES PATENT OFFICE.

THOMAS JACKSON RIDGWAY AND JONAS FRANKLIN DIXON, OF
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BED-SPRING.

SPECIFICATION forming part of Letters Patent No. 744,237, dated November 17, 1903.

Application filed July 31, 1902. Serial No. 117,857. (No model.)

To all whom it may concern:

Be it known that we, THOMAS JACKSON RIDGWAY and JONAS FRANKLIN DIXON, citizens of the United States, residing at Carthage, in the county of Jasper and State of Missouri, have invented a new and useful Bed-Spring, of which the following is a specification.

This invention relates to springs for beds, furniture, and the like.

The object of the invention is to strengthen and generally improve spring structures by interlocking and staying the several elements thereof in such manner as that they will jointly contribute to the production of a highly-resilient structure, which shall be free from liability of breaking down or becoming distorted in use.

With these and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a bed-spring, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like numerals of reference indicate corresponding parts, there is illustrated one form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the elements therein exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the spirit thereof.

In the drawings, Figure 1 is a view in top plan of a portion of a bed-spring constructed in accordance with the present invention. Fig. 2 is an enlarged detail view in perspective of the upper portion of one of the springs.

Fig. 3 is a view in vertical section through the upper portion of one of the springs. Fig. 4 is a perspective detail view of a clip for associating the upper whirls of the springs. Fig. 5 is a perspective detail view of the lower portion of one of the springs. Fig. 6 is a similar view of one of the upper stay-wires. Fig. 7 is a perspective detail view showing the construction of the clip portion of the upper whirl of the spring. Fig. 8 is a perspective view of the lower portion of one of the supporting springs, showing the manner in which

the cross-wires of the lower frame are secured to the springs.

Referring to the drawings, 1 designates the top frame of the structure, and 2 the bottom frame thereof, the same being by preference rectangular in shape and constructed of heavy wire, as usual.

The springs 3, of which there may be any desired number, and which constitute one of the essential features of the present invention, are approximately inverted truncated cones in elevation and comprise each a plurality of top whirls 4, disposed in the same plane, thus to present a flat top to the structure, which will prevent undue wear of the mattress and will cause the spring as a whole to be more comfortable in use and possess greater resiliency, for the reason that a wider area of each of the springs is imposed by the mattress. As shown in Fig. 1, two of the top whirls are disposed in the same plane, and in Fig. 3 three of the said whirls are so arranged; but it is to be understood that the invention is not to be limited to these numbers, as they may be increased up to four, five, or even a greater number and still be within the scope of the invention. The second whirl, or that next to the outer one, is provided with a kink 5, disposed in approximately a horizontal plane, and the terminal of the outer whirl is bent downward into a kink 6, disposed in alinement with the kink 5 and then at right angles to its length and is doubled to present a loop 7, which includes two of the whirls, the straight terminal of the said outer whirl being bent to form a downwardly-extending loop 8, the free end being extended back parallel with the member 9 and bent downward to form a hook or stop 10.

The lower whirl of the spring is formed into an approximately triangular loop 11, the free terminal 12 of said loop constituting a locking member.

The extended loop-bearing member of the upper whirl constitutes a clip (designated generally 13) which operates to connect two adjacent springs. The opposite sides of the same springs are connected with the next adjacent pair by clips 14, one of which is shown diagrammatically in Fig. 4 and comprises two end loops 15, having downward-extend-

ing members 16 and an intermediate straight member 17, the terminals of the loops 15 being downturned to present stops 18.

Associated with the top whirls are stay-wires 19, provided with a plurality of kinks 20, one of which coacts with each spring.

The bottom whirls of the springs are associated with cross-wires 21 and 22, which have their terminals secured around the bottom frame 2.

In associating the springs with the bottom frame the cross-wires 21 are passed through the loops 11 under the lower whirls of the springs, and the cross-wires 22 are passed through the said loops above the lower whirls of the said springs, and the locking member 12 is then clenched down over the juncture of the two wires, thereby securely locking them in position. After the springs are thus associated with the bottom cross-wires the terminals of the latter are clenched or turned around the sides and ends of the frame, as clearly shown in Fig. 1.

In associating the upper portions of the springs with the top frame the terminals of the loop 6 are secured around the side wires of the frame, as shown at 23 in Fig. 1, it being understood that this order is to be maintained throughout the entire length of the mattress. The guy-wires are then secured at their terminals to the ends of the upper frame, as by being clenched or turned thereupon, bringing the kinks 20 under the kinks 5 of the second upper whirl and operating to support these whirls against sagging, the whirls on the opposite side of the top of the springs being similarly stayed against sagging by the loop 6. With the second longitudinal row of springs the kinks of the stay-wires and of the whirls are held associated by the loops 8 of the clips 13, the stop 10 projecting downward beyond the outer whirl. The loop 8 is not clenched around the kinks referred to, so that freedom of movement of the springs will be assured and any binding action positively obviated. The next two adjacent rows of springs are held assembled by the clips 14, the loops 16 of which assemble the kinks of the stay-wires and of the whirls in the same manner as the kinks 15, the stops 18 of the clips 14 also being extended down beyond the whirls of the springs, and thus not only operating to hold them against undue lateral spread, but also obviating the presentation of sharp points that would tend to cut the mattress or any other object placed upon the spring.

The manner of assembling the top whirls of the springs as described will not only be effective in preventing their working loose or becoming separated, but will also insure the

top whirls of the springs being kept in a level plane, thereby, as before pointed out, presenting a broad bearing-surface for the mattress.

When the locking member 12 of the loop 11 is clenched around the bottom cross-wires, there are kinks formed at the juncture of the latter which will positively prevent any slipping either of the springs with relation to the said cross-wires or of the cross-wires with relation to the springs in the use of the structure.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a structure of the character specified, a supporting-spring having a plurality of its upper whirls disposed in the same plane, the terminal of the whirl being formed into a clip to inclose the said whirls and to constitute a means for securing the spring against movement, stay-wires disposed beneath the whirls of the spring opposite the clip, the spring and stay-wires being formed with kinks at their point of intersection, and a clip inclosing said kinks.

2. In a structure of the character specified, a supporting-spring having a plurality of its upper whirls disposed in the same plane, the terminals of the outer whirl being formed into a clip to inclose the said whirls, the terminal of the lower whirl being formed into an upwardly-extending triangular loop, and cross-wires disposed respectively above and below the lowermost whirl and held in position by being clamped between the members of the loop.

3. In a structure of the character specified, springs having their lower whirls formed into upward-extending triangular loops, and cross-wires disposed respectively above and below the lowermost whirls and held in position by being clamped between the members of the said loops.

4. A structure of the character specified, comprising top and bottom frames, stay-wires and supporting-springs each having a plurality of its upper whirls disposed in the same plane, a terminal of the outer whirl being formed into a clip to inclose the said whirls and to connect with a plurality of the whirls of an adjacent spring, and with a stay-wire.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

THOMAS JACKSON RIDGWAY.
JONAS FRANKLIN DIXON.

Witnesses:

W. B. CRAWFORD,
E. A. CRAWFORD.