

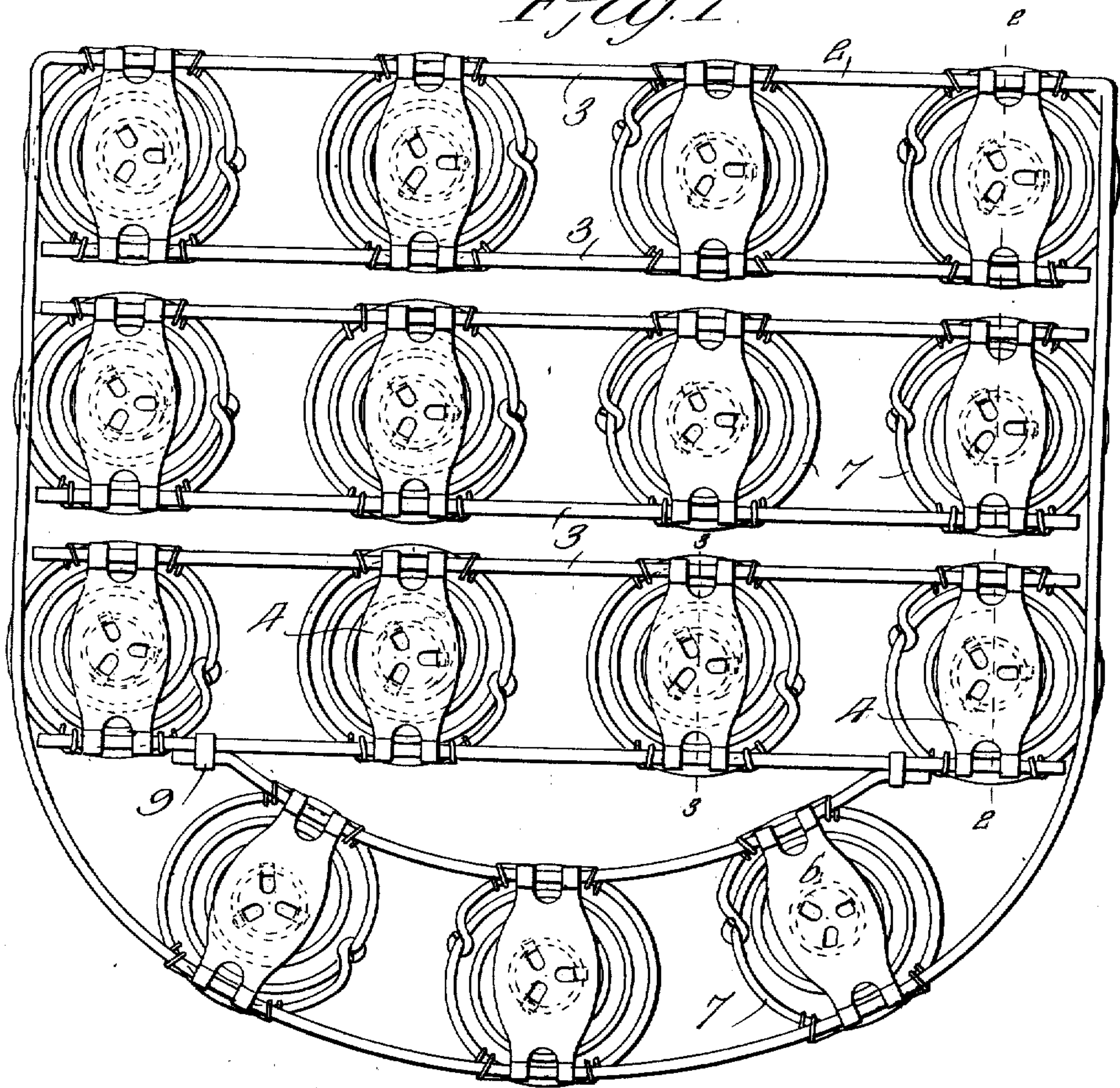
F. B. KING.  
SPRING.

APPLICATION FILED JUNE 12, 1908.

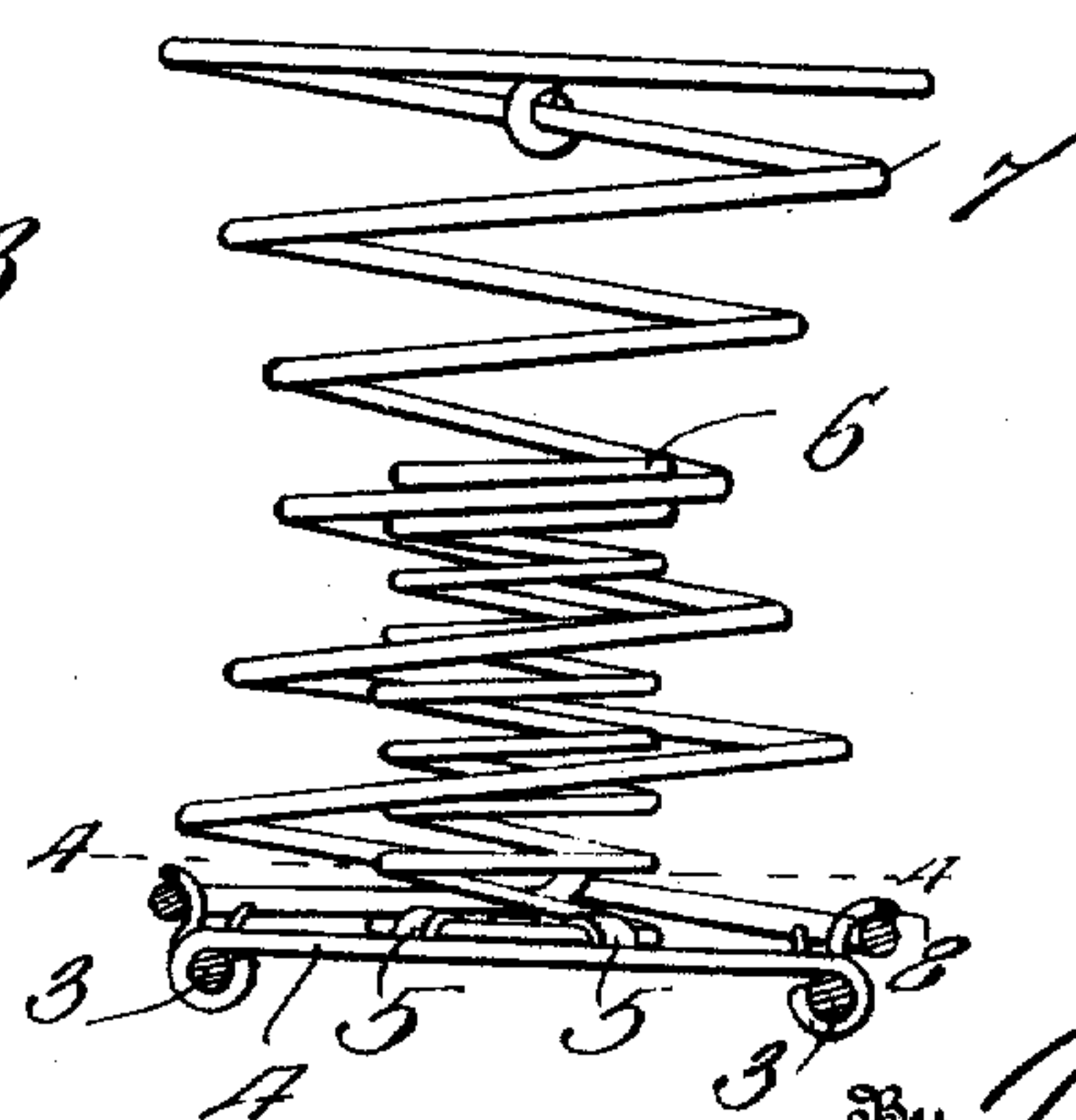
912,855.

Patented Feb. 16, 1909.  
2 SHEETS—SHEET 1.

*Fig. 1*



*Fig. 3*



Witnesses  
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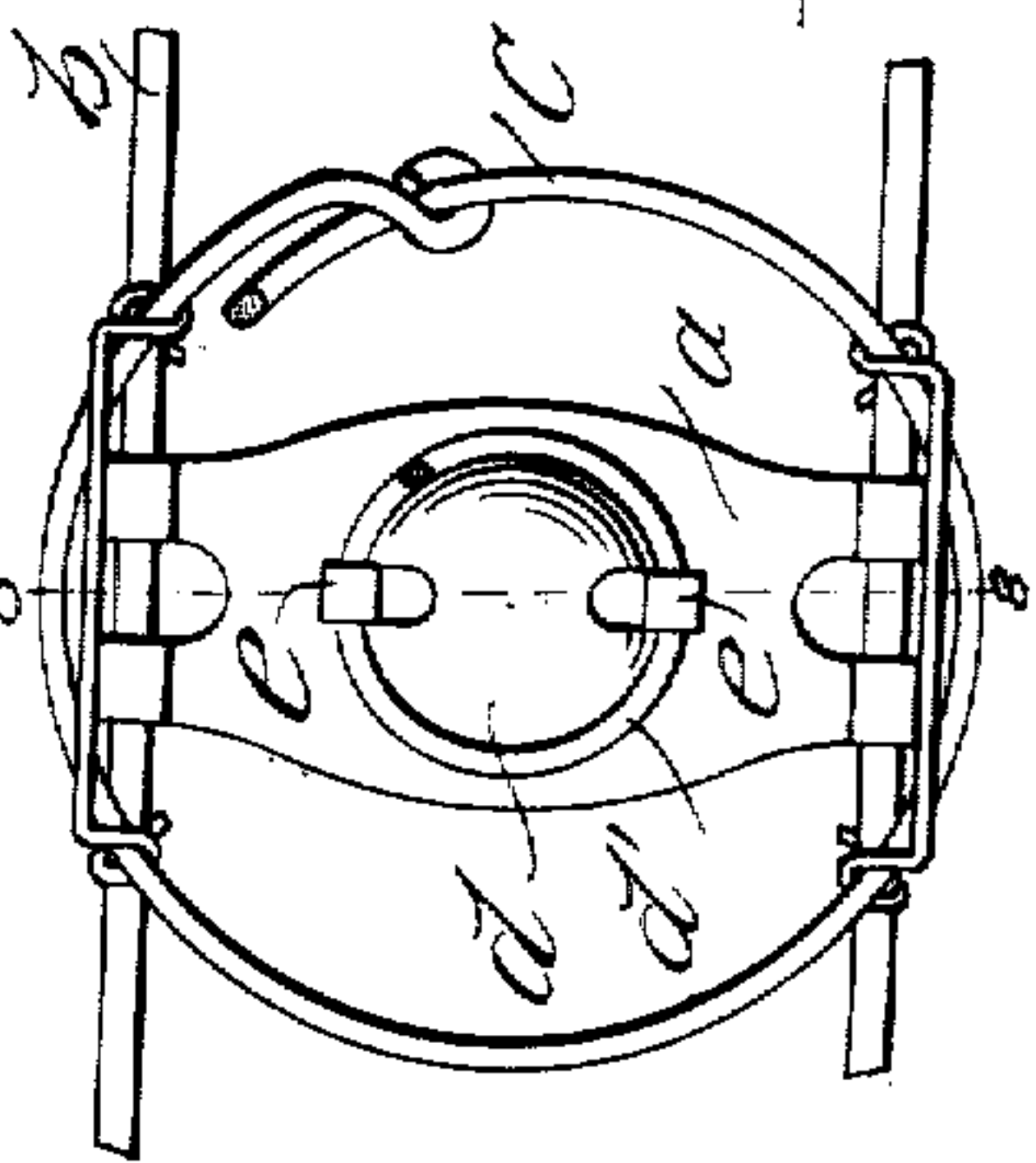
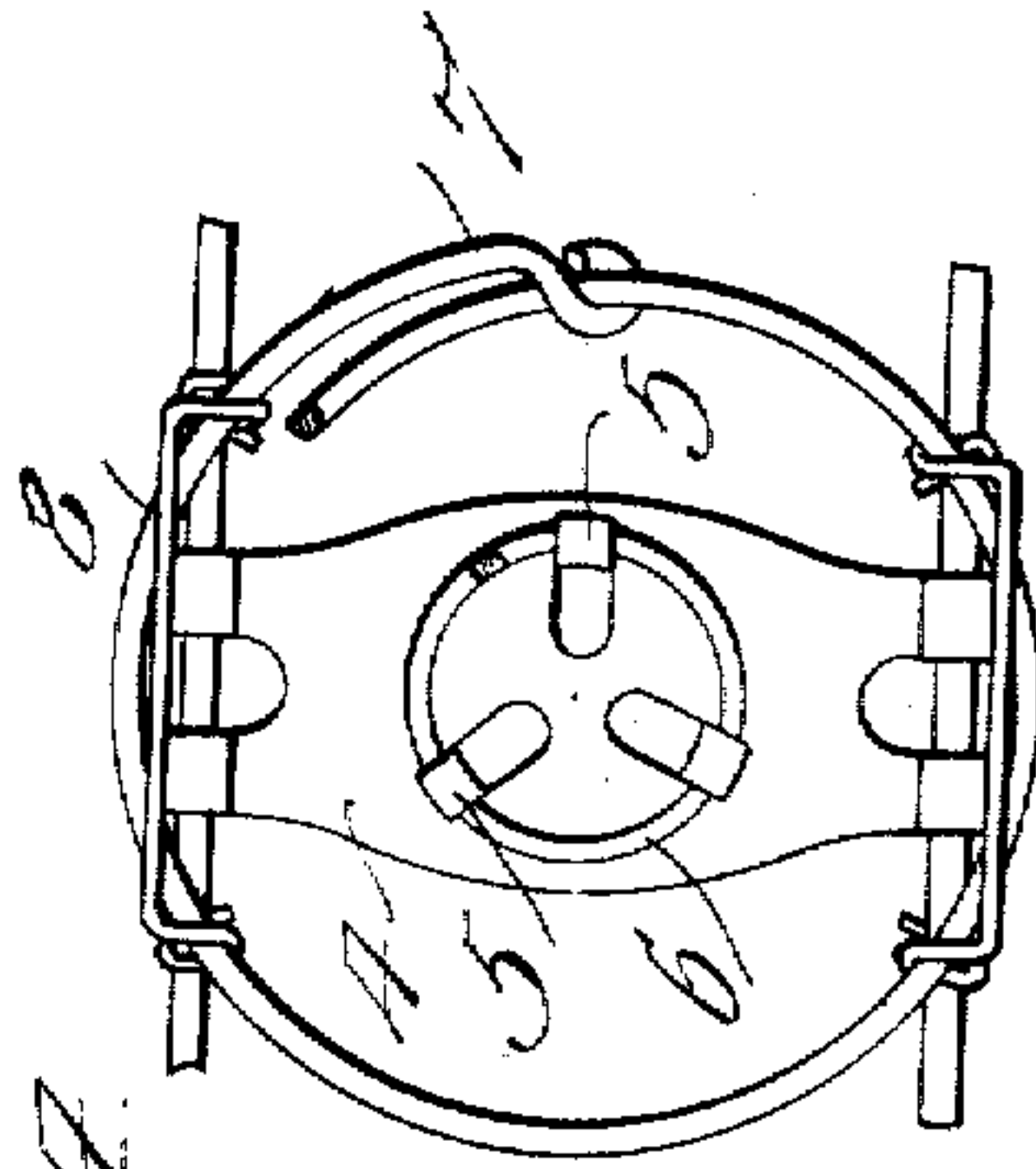
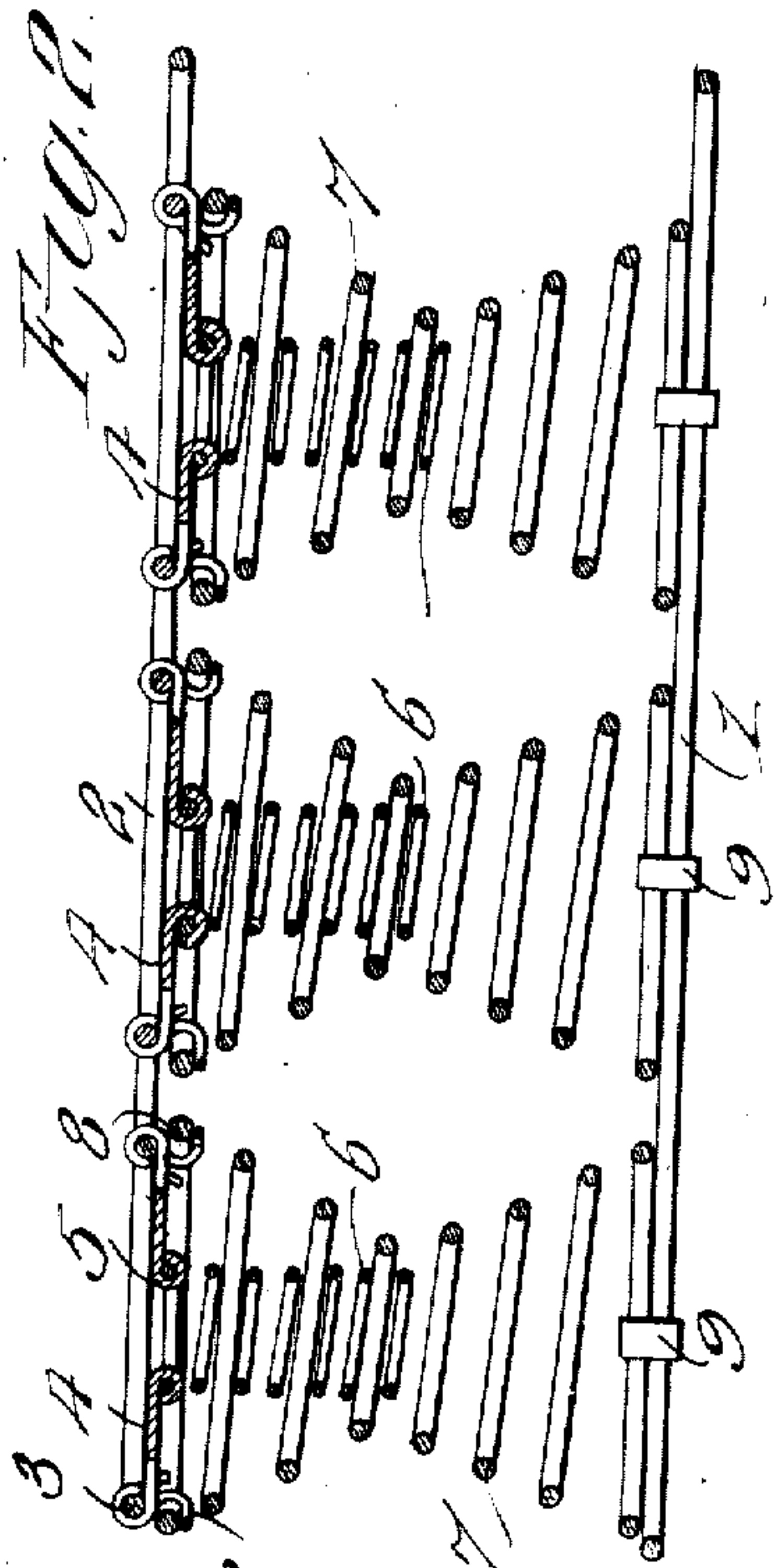
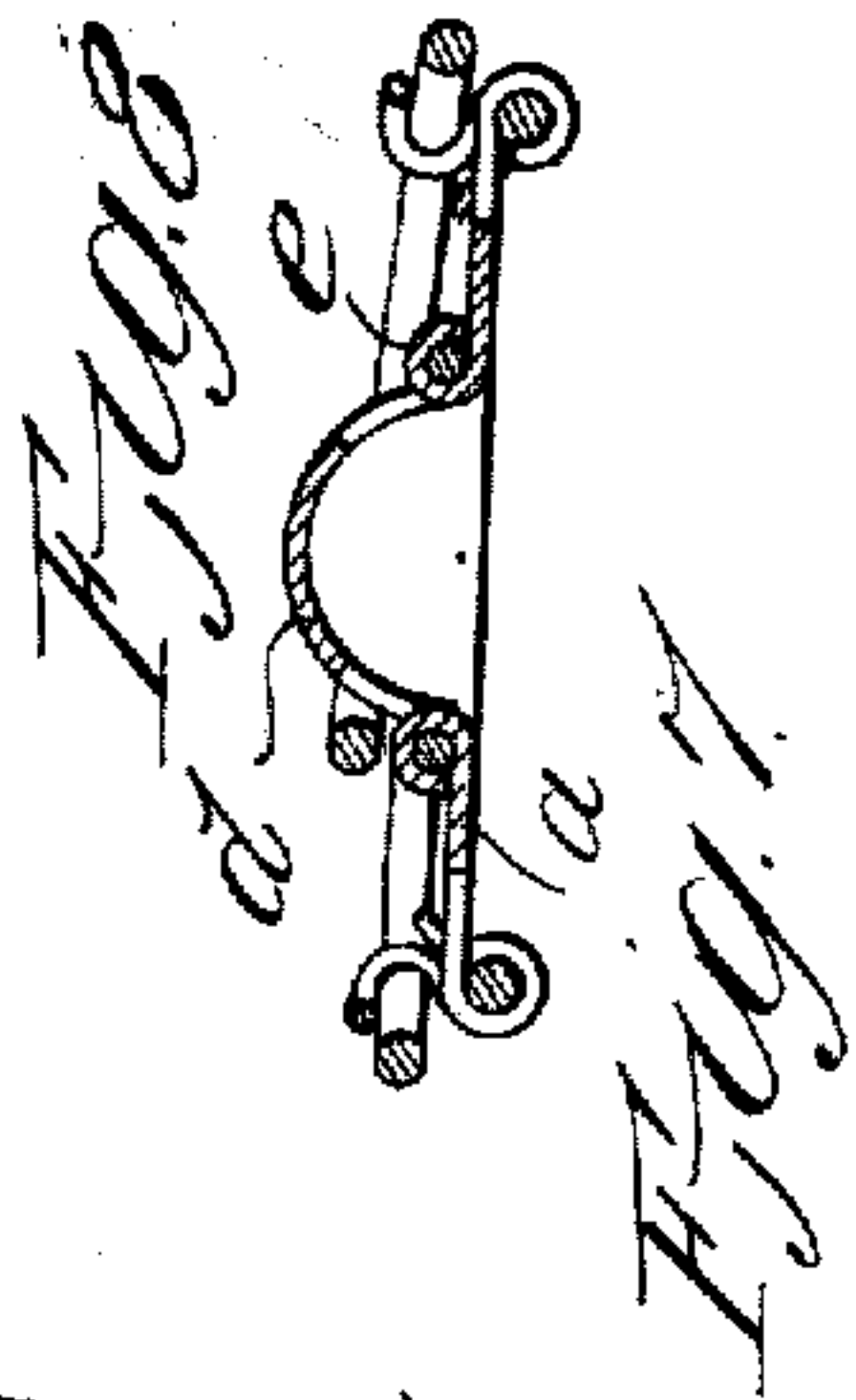
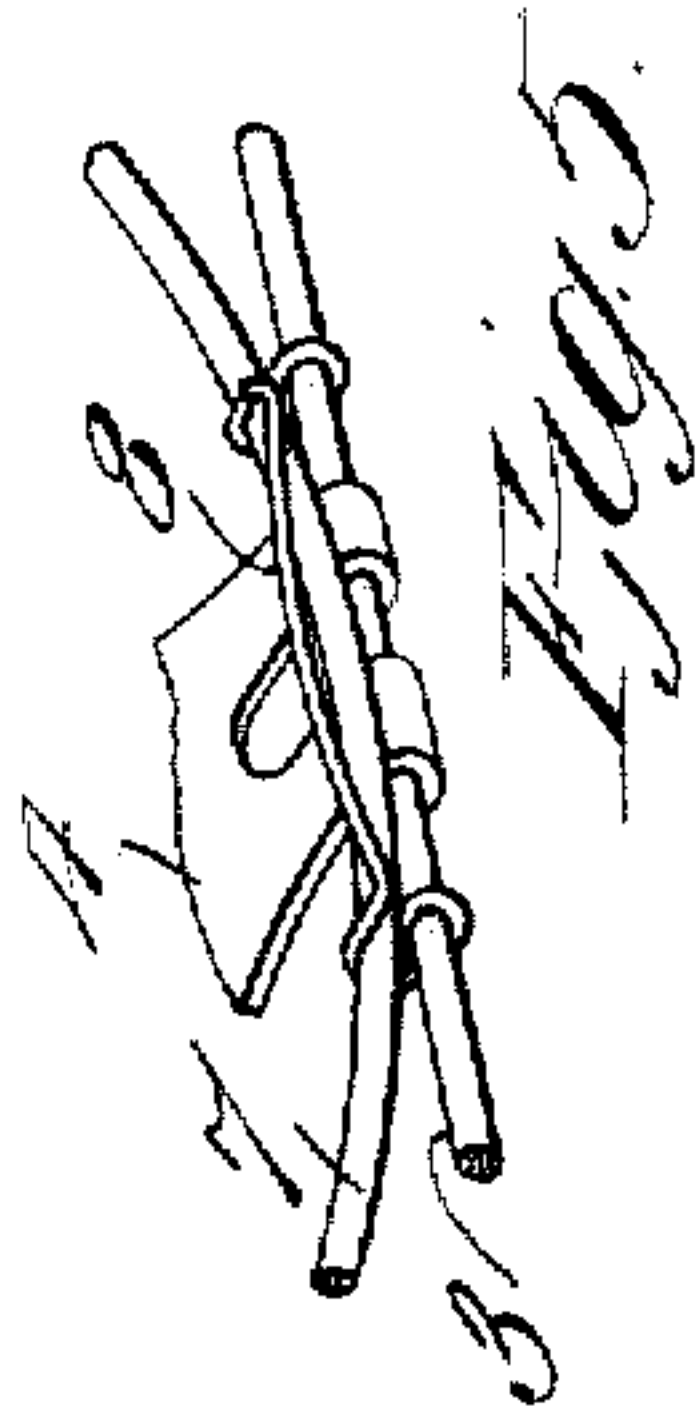
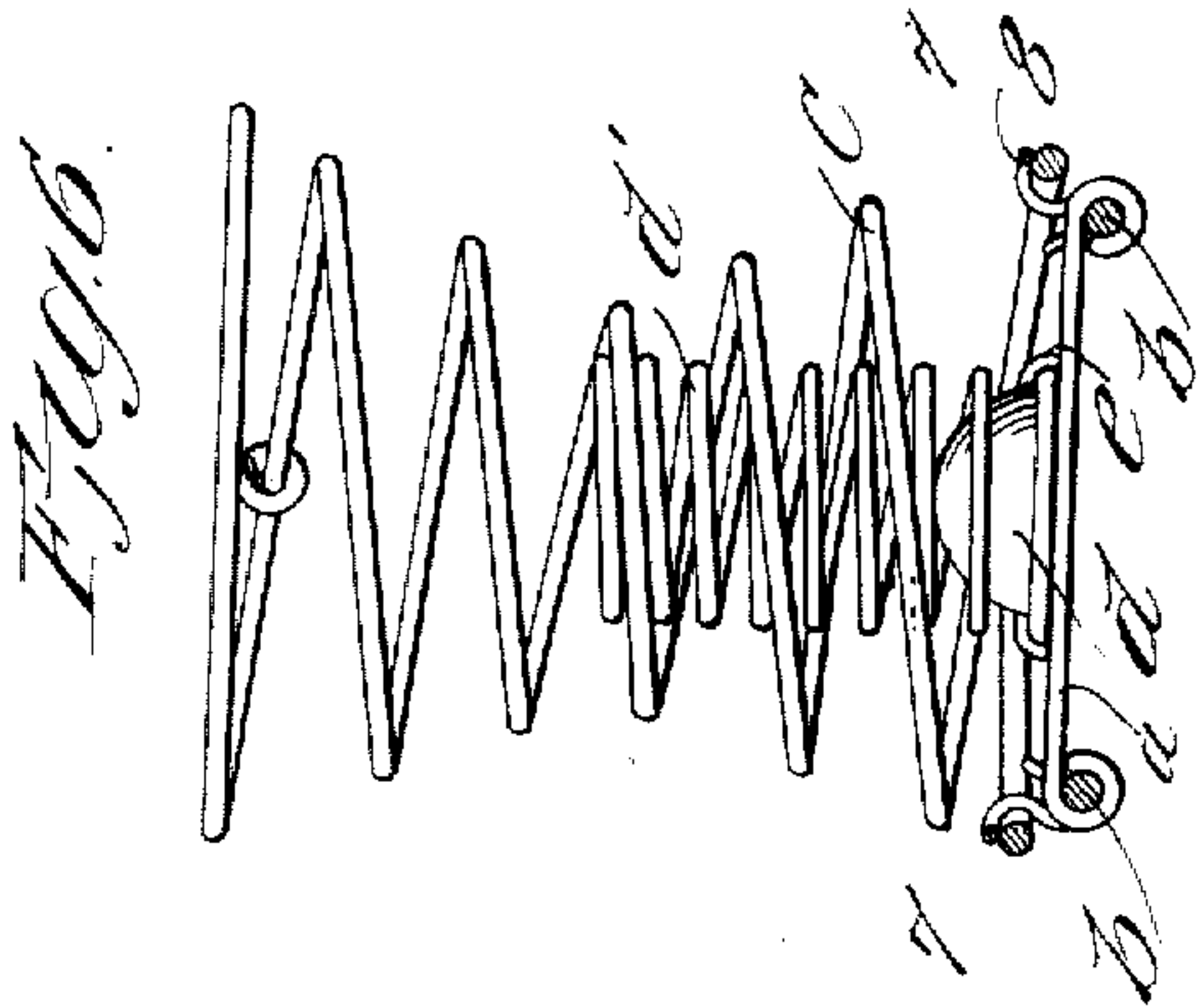
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2 SHEETS—SHEET 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

FRED B. KING, OF ALBION, MICHIGAN.

## SPRING.

No. 912,855.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed June 12, 1908. Serial No. 438,240.

*To all whom it may concern:*

Be it known that I, FRED B. KING, a citizen of the United States, residing at Albion, in the county of Calhoun and State of Michigan, have invented new and useful Improvements in Springs, of which the following is a specification.

This invention relates to spring cushions of that class primarily intended for use in connection with vehicles but equally applicable to chairs, stools, beds and the like, and the object of the invention is to provide a spring cushion of a comparatively simple and cheap construction which embodies novel features whereby the springs may be easily and quickly attached to a frame, and which is provided with an auxiliary spring positioned within each of the main springs and adapted to serve as a cushion or buffer to prevent jar when the main springs are compressed.

With these and other objects in view the invention resides in the novel construction and arrangement of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a bottom plan view of a spring cushion constructed in accordance with the present invention. Fig. 2 is a sectional view upon the line 2—2 of Fig. 1. Fig. 3 is a sectional view upon the line 3—3 of Fig. 1. Fig. 4 is a detail sectional view upon the line 4—4 of Fig. 3. Fig. 5 is a detail perspective view illustrating the means of connecting the plates with the supporting wires and the spring with the wires. Fig. 6 is a detail sectional view of a modified form. Fig. 7 is a sectional view upon the line 7—7 of Fig. 6. Fig. 8 is a sectional view upon the line 8—8 of Fig. 7.

In the accompanying drawings, and referring particularly to Figs. 1 to 5 inclusive the numerals 1 and 2 designate the upper and lower edge wires of the cushion. The cushion may be of any desired formation suitable for the purpose for which it is intended, and the edge wires 1 and 2 are each provided with a plurality of supporting wires 3. These supporting wires 3 are arranged in pairs suitably spaced from each other and connected by plates 4. The plates 4 have their ends bifurcated, and the

arms thus provided are bent around the supporting wires 3 to effectively retain them in spaced relation with each other. The plates 4 have their body portions provided with slits, and the tongues 5 provided by the slits are bent upon themselves to form retaining elements adapted for the support of an auxiliary spring or buffer 6. Interposed between the top and bottom brace or supporting wires 3 is a plurality of double cone-shaped springs 7. These springs 7 have their upper convolutions connected with the supporting wires 3 by a tie member 8. This tie member is constructed of a single strand of suitable wire, and is adapted to bridge the bifurcated fingers of the plates 4 and to encircle the convolution of the spring and to tightly engage the supporting wires 3. By this means it will be noted that the spring 7 may be quickly and easily connected with the supporting wire 3. The lower convolution of the spring 7 may be connected with the supporting wire 3 by an ordinary clip 9, as clearly illustrated in Fig. 2 of the drawings, but it is to be understood that this particular manner of connecting the spring with the supporting wires is not to be used exclusively as various similar means may be effectively employed.

In Figs. 6 to 8 a slightly modified form of the device is illustrated. In these figures the plate *a* has its ends bifurcated similar to the plate 4 and these bifurcated ends are bent to engage the supporting wires *b*. These wires *b* are connected with the springs *c* in a manner similar to that described in connection with the other figures of the drawings. The plate *a* is provided with a central embossed portion *d* and this embossed portion has its sides slit to provide ears *e* adapted to be bent upon themselves to form securing elements for the cushion spring *d'*. It is to be understood that the cushion springs 6 and *d* are positioned within the larger double cone-springs connecting the top and the bottom of the frame.

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

In a spring cushion, the combination with a frame comprising upper and lower spaced parallel rods, spiral springs between

the upper and lower frames, plates connecting the rods, said plates being centrally provided with a semi-cylindrical embossed portion, said embossed portion being slitted  
5 to provide tongues and a cushion spring engaged by said tongues and positioned centrally of the spiral springs.

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

FRED B. KING.

Witnesses:

DAVID A. GARFIELD,  
T. N. BROCKWAY.