

No. 658,669.

Patented Sept. 25, 1900.

J. W. MORROW.

SPECULUM.

(Application filed July 29, 1899.)

(No Model.)

Fig. 1.

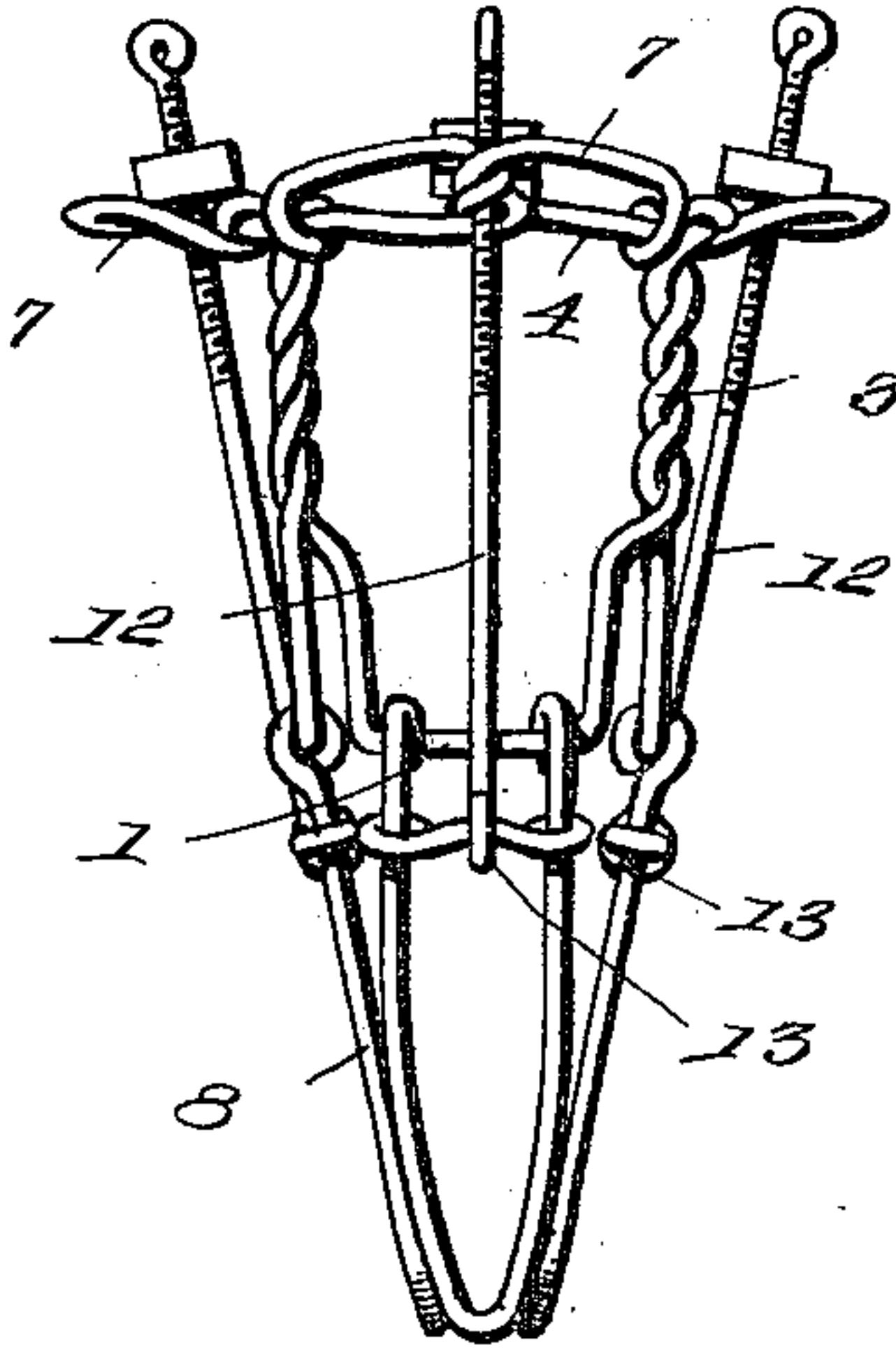


Fig. 2.

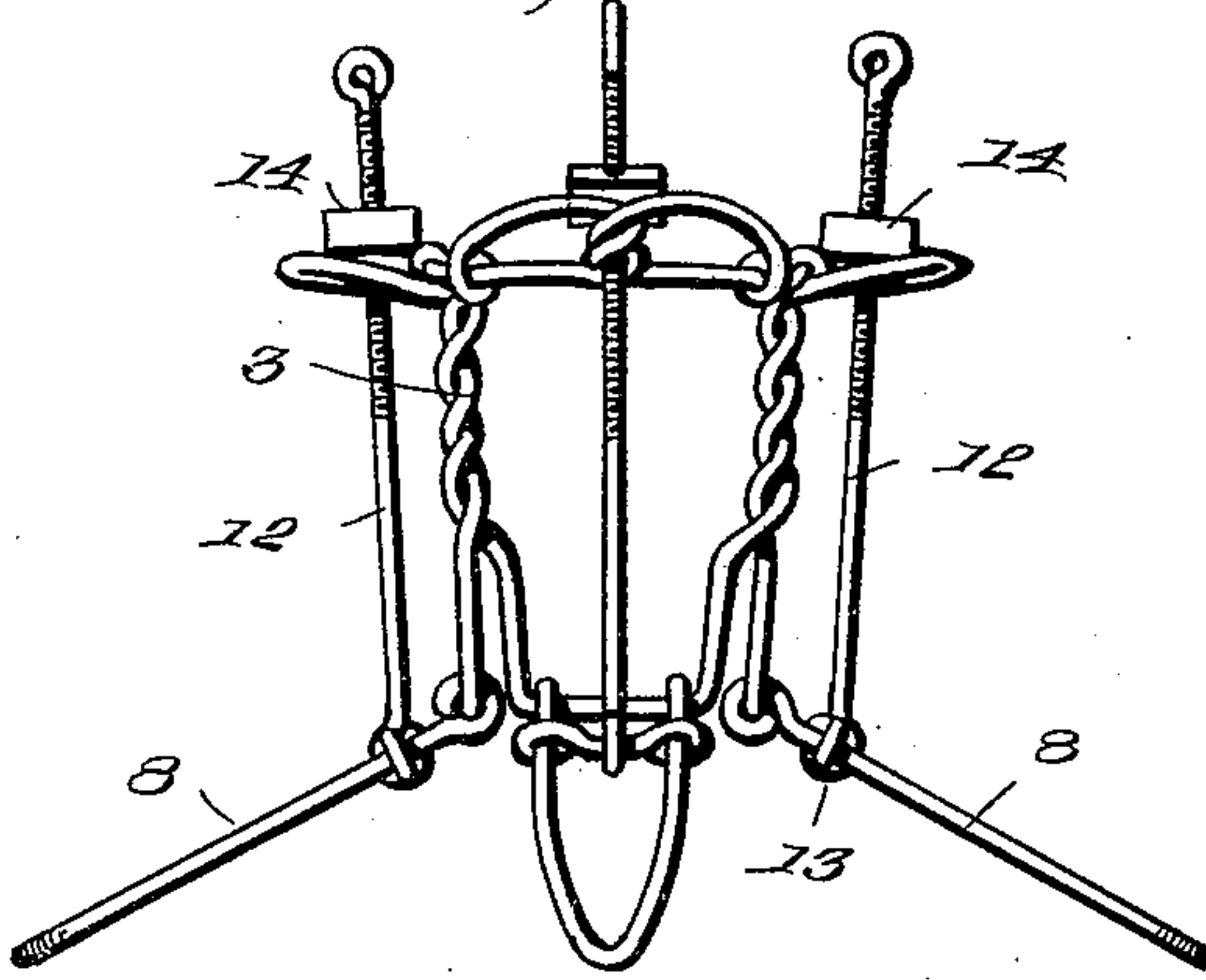


Fig. 3.

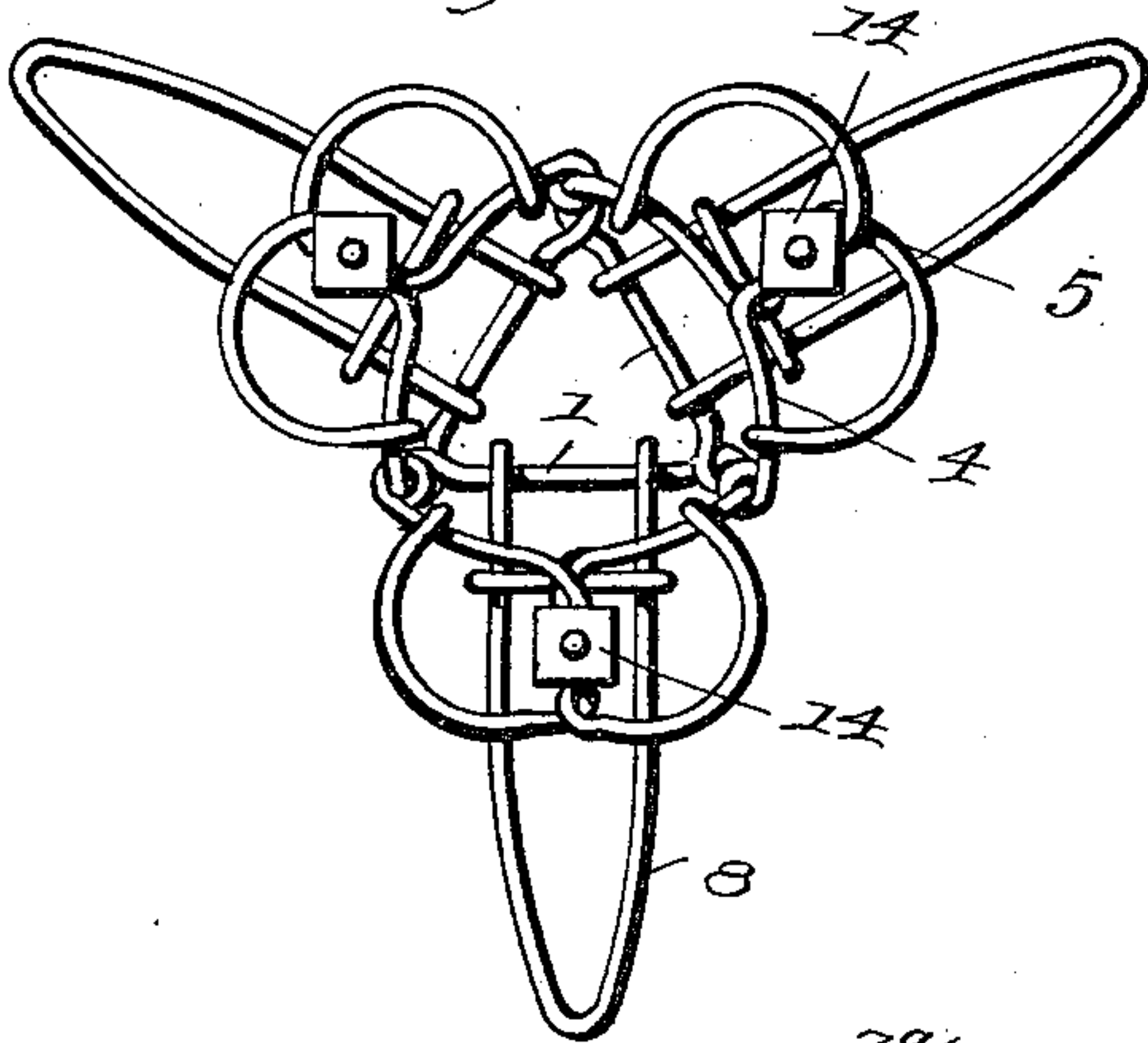


Fig. 4.

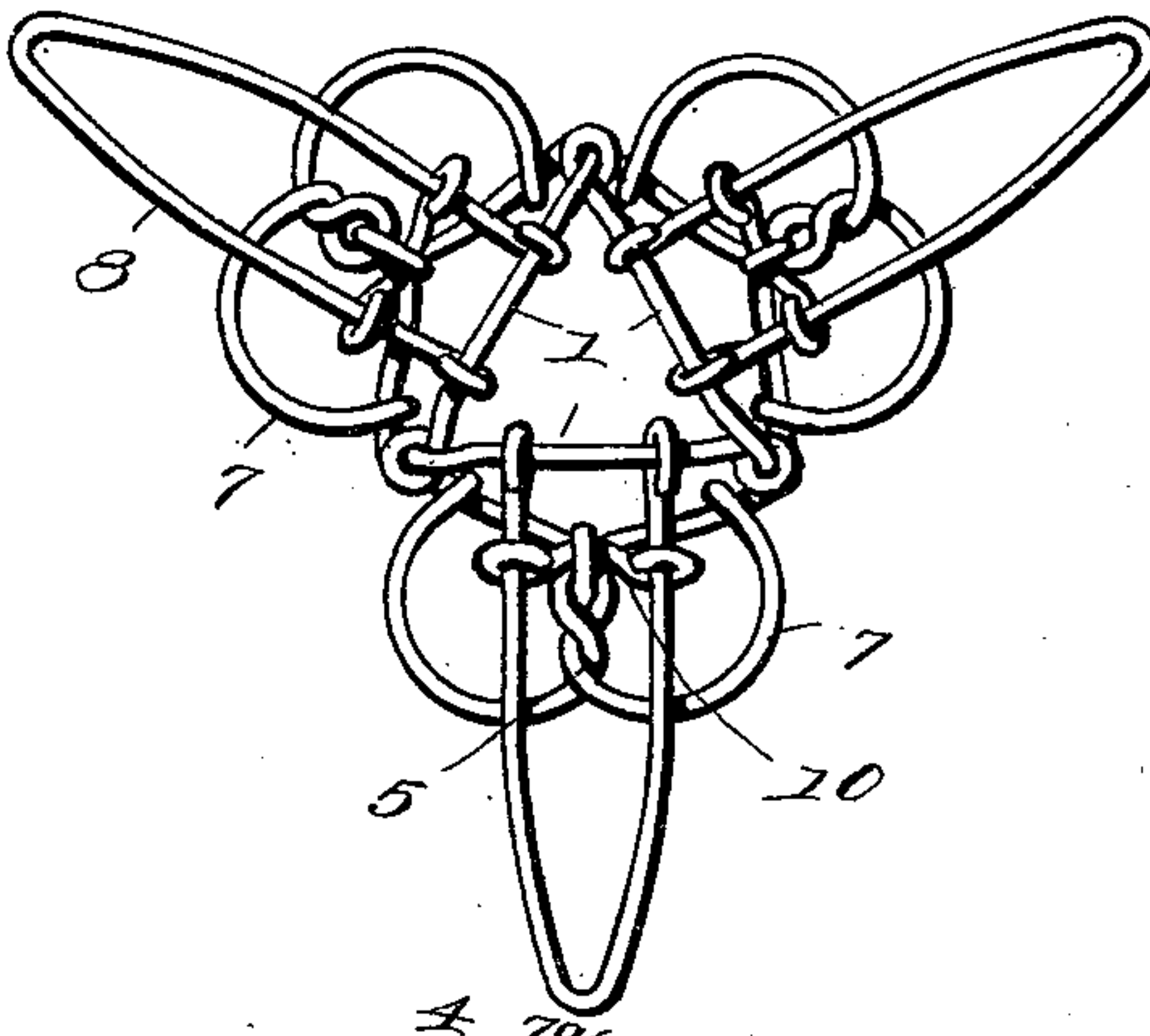


Fig. 5.

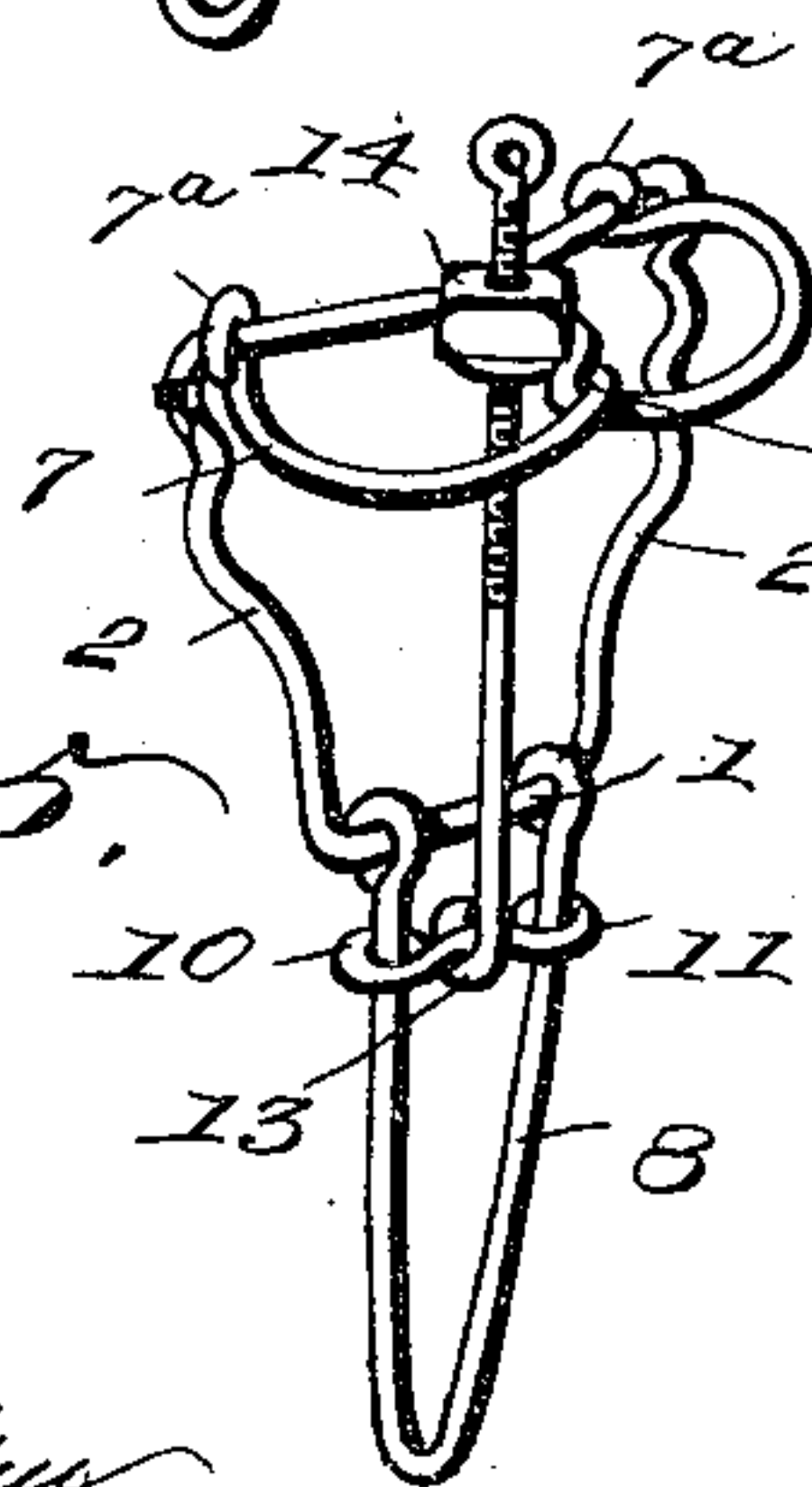
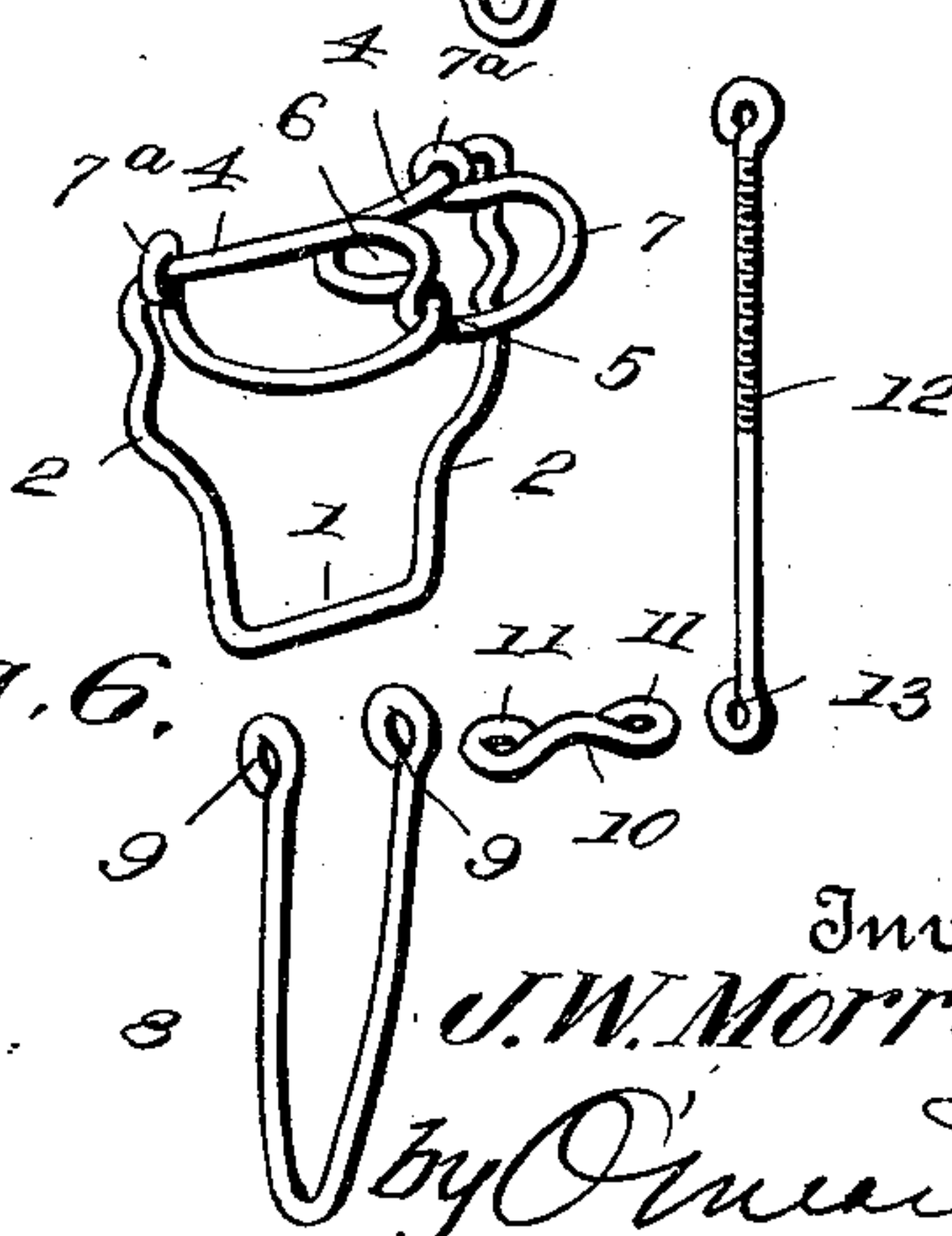


Fig. 6.



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# UNITED STATES PATENT OFFICE.

JOHN W. MORROW, OF NOBILITY, TEXAS.

## SPECULUM.

SPECIFICATION forming part of Letters Patent No. 658,669, dated September 25, 1900.

Application filed July 29, 1899. Serial No. 725,533. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. MORROW, a citizen of the United States, residing at Nobility, in the county of Fannin and State of Texas, have invented a new and useful Speculum, of which the following is a specification.

My invention relates to surgical instruments, and particularly to the surgical instrument known as the "speculum" for use in treating diseases of the womb, the object of the invention being to provide a generally-improved instrument of this class.

With this object in view my invention consists in the improved construction, arrangement, and combination of parts hereinafter fully described and afterward specifically pointed out in the appended claims.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, reference being had to the accompanying drawings, forming part hereof, in which—

Figure 1 is a view in side elevation of the instrument. Fig. 2 is a side elevation of the instrument in a different adjustment. Fig. 3 is an outer end elevation in the adjustment shown in Fig. 2. Fig. 4 is an inner end elevation in the same adjustment. Fig. 5 is a detail perspective view of one member of my improved instrument detached in the adjustment of Fig. 1. Fig. 6 is a detail perspective view illustrating the several parts of one member detached from each other.

Like numerals of reference indicate the same parts wherever they appear in the several figures of the drawings.

The instrument is made of wire, preferably a non-corrosive wire, or of metal rendered non-corrosive by properly coating it with non-corrosive metal. It is composed of three or more members, three being shown in this instance, one of which is illustrated detached in Fig. 6. Inasmuch as all of these sections are alike in construction, their various corresponding parts being duplicates, the various parts will be marked by the same numerals. Each section is composed of four pieces of wire and a nut or tap. The first piece of wire to be described is bent so as to form at its mid-length a straight bar 1, which forms the inner end of the wire, these wires of the sev-

eral members when connected together forming the outer or anterior section of the complete instrument. From the cross-wire 1 at each end the wire is bent outward, forming sides 2 2, which are intertwisted with the corresponding parts of the adjacent members, as at 3, and forms the only connection between the several members. From the outer ends of the sides 2 2 the parts of the wire ends are curved laterally outward, as at 4 4, and twisted about each other, as at 5, the middle of the twist being opened to form a space 6, the curves 4 4 and twist 5 being in the same plane, their plane being substantially at a right angle to that of the cross-bar 1 and sides 2 2. From the outer end of twist 6 the ends of the wire are curved, as at 7, and brought back in the same plane and looped or hooked around the curves 7<sup>a</sup> 7<sup>a</sup>, forming the exterior flange of the instrument. The second piece of wire of each member is bent centrally in U shape, as at 8, and pivotally secured at its inner ends 9 9 upon the cross-bar 1. The third piece of wire of each member forms a connecting cross-bar between the sides of the second piece, as at 10, being secured thereto at 11 11. The fourth and last piece 12 of wire of each member is hooked at its outer end around the cross-bar 10 and has its inner end 13 threaded to pass through space 6 and receive a nut or tap 14 outside of the exterior flange.

In operation the instrument, adjusted as illustrated in Fig. 1, is inserted into the cavity to be expanded, the U-shaped piece entering the cavity and forming the interior flange of the instrument and the exterior flange resting on the edges of the opening outside thereof. The nuts or taps 14 are now turned inward by means of a suitable wrench, (not shown,) drawing the threaded wires 12 outward and spreading the interior flange, thus distending the cavity, so that the interior may be subjected to any desired treatment through the central opening of the instrument between the sides 2 2 of the exterior section.

The advantages attending the use of my improved instrument will be obvious to the practitioner and need not be further mentioned here. The simplicity and ease of operation will also be readily apparent.

While I have described the construction of



the various parts minutely, I desire it to be understood that I do not restrict myself to exact construction, but hold that any slight changes or variations, such as might suggest  
5 themselves to the ordinary mechanic, would be clearly included within the limit and scope of my invention.

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

1. A speculum consisting of a plurality of connected members each comprising a wire, bent to form an interior cross-bar, sides, and a laterally-extending flange, a second wire  
15 bent into U shape and pivotally connected at its inner ends upon said cross-bar, a connecting-bar between the sides of the U-shaped wire near its inner ends, a threaded wire engaged with said connecting-bar, and passing  
20 through the lateral flange substantially as described.

2. In a wire speculum, the combination of the plurality of members, each comprising a wire bent to form a cross-bar sides and lateral  
25 flanges, the sides of adjacent members being

intertwisted, a second wire forming a pivoted spreading-arm, and exterior means for spreading the arm substantially as described.

3. The herein-described speculum, consisting of a plurality of members, each member comprising a wire bent to form a cross-  
30 bar, at its mid-length, thence bent inwardly to form sides, said sides being intertwined with the sides of adjacent members, thence curved outwardly, twisted to form an open  
35 space and finally curved back and secured to the first-named curves, a second wire bent into U shape and pivotally connected to the cross-bar, a connecting-bar between the sides of the U near its inner pivotal ends, a thread-  
40 ed wire engaging with the connecting-bar and extending outward through the opening-space formed in the twist of the first piece of wire, and a nut on the threaded wire, all the  
45 parts being combined substantially in the manner and for the purpose set forth.

JOHN W. MORROW.

Witnesses:

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