

No. 618,746.

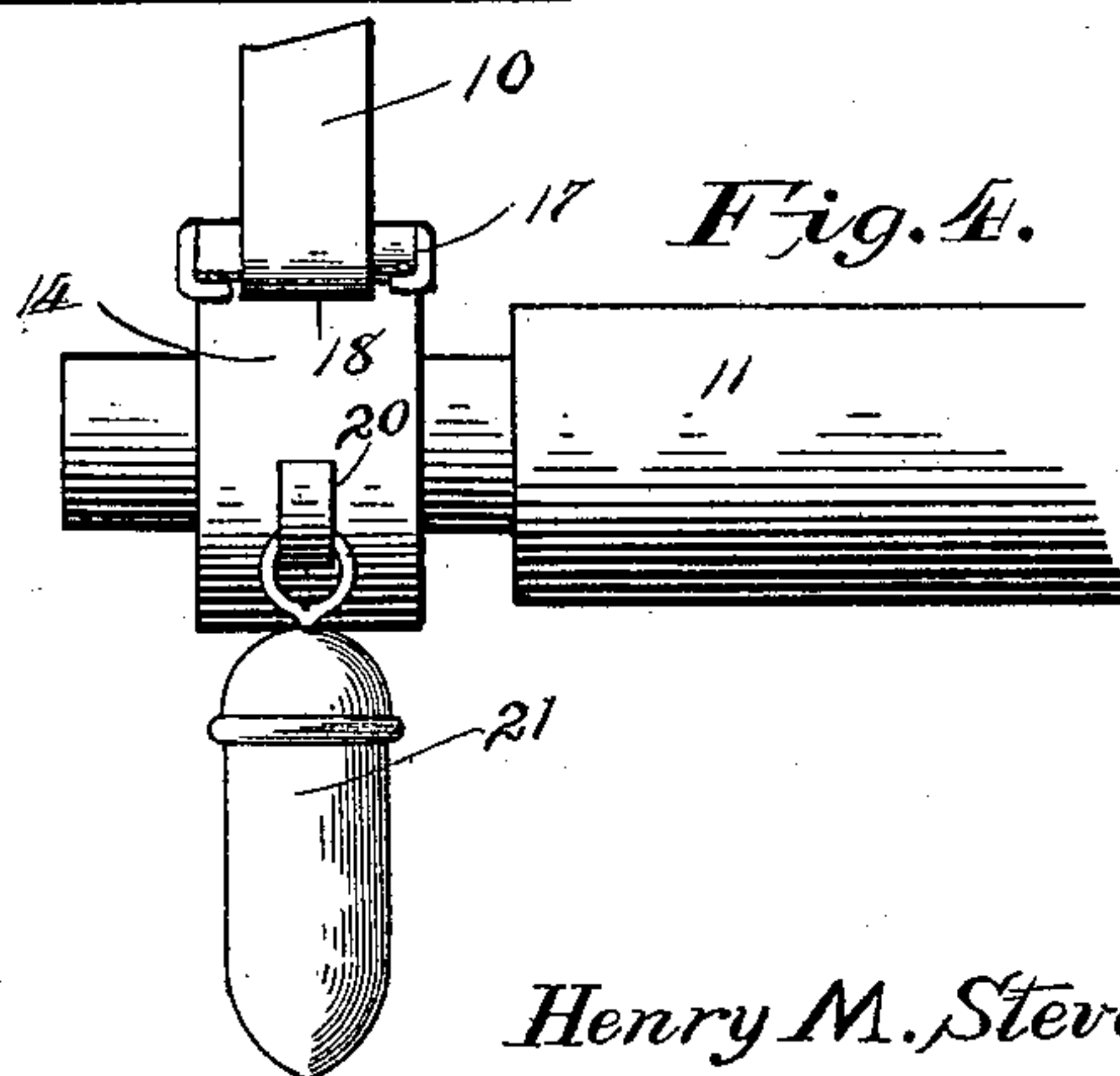
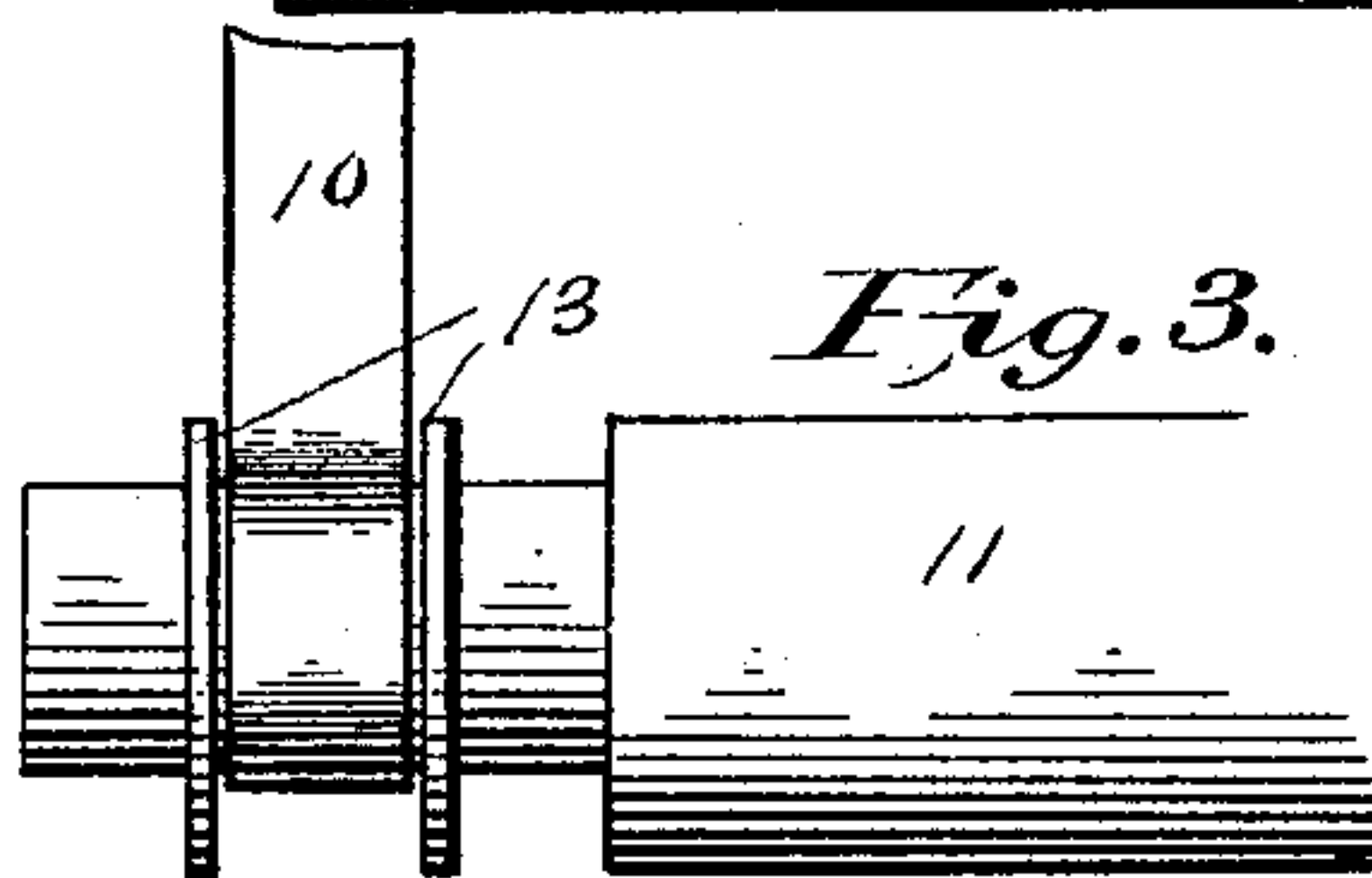
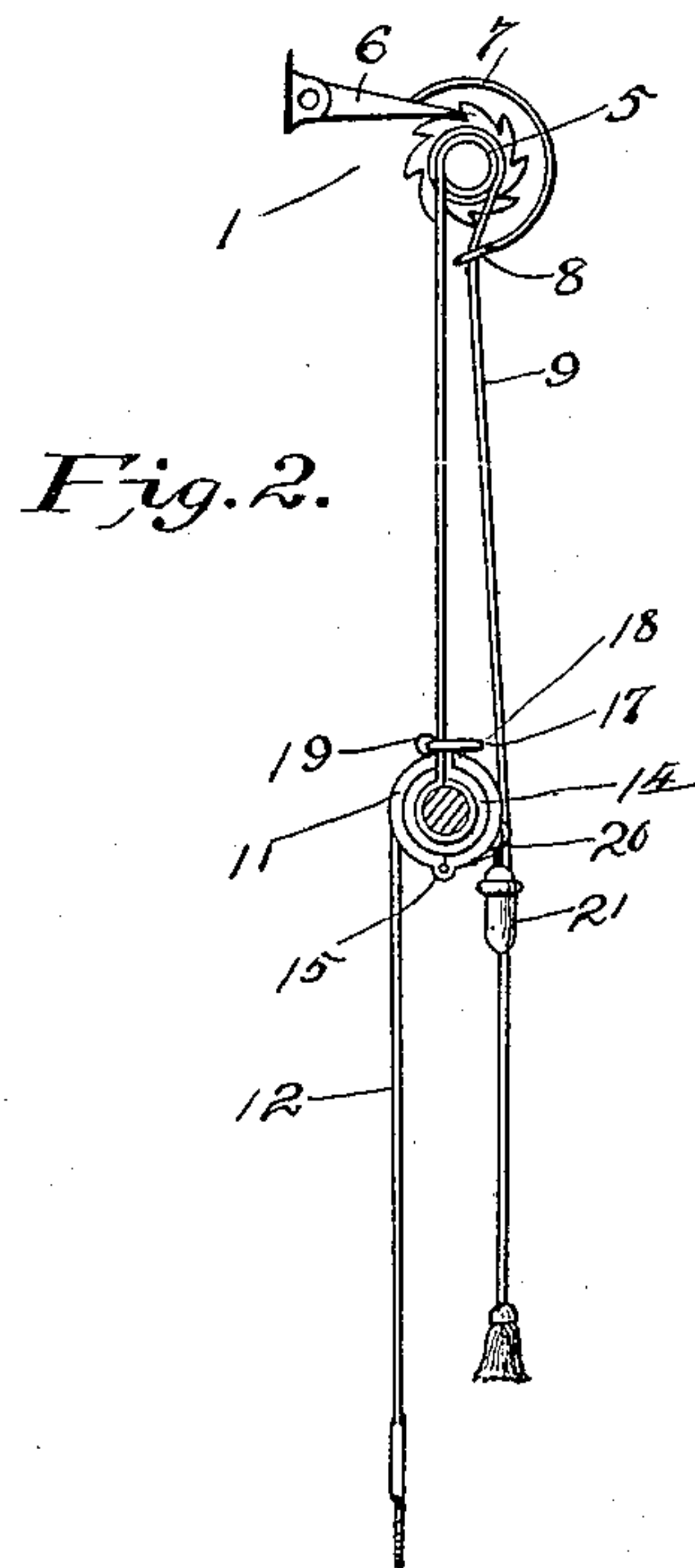
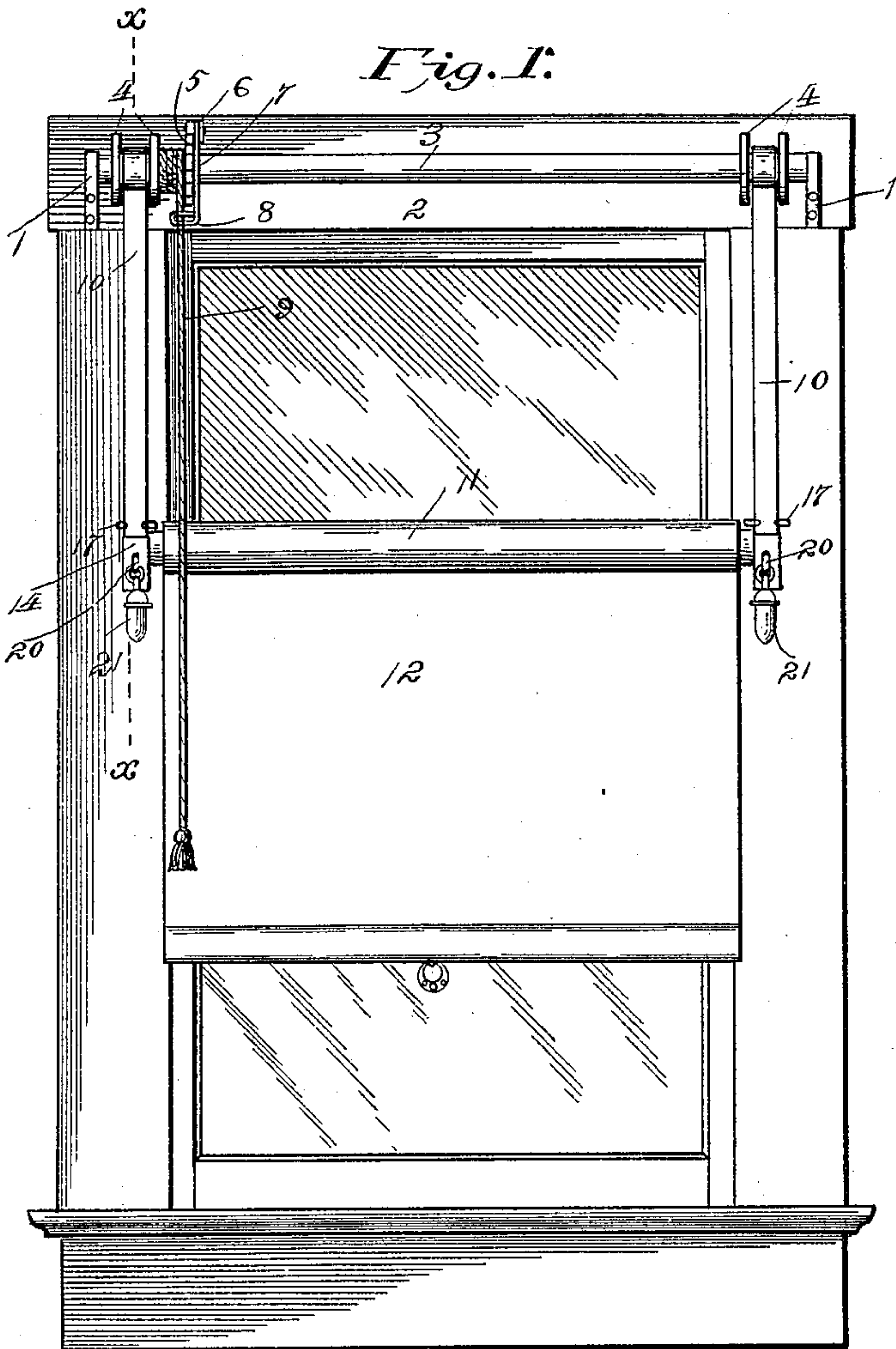
Patented Jan. 31, 1899.

H. M. STEVENSON.  
CURTAIN FIXTURE.

(Application filed Feb. 11, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses  
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2 Sheets—Sheet 2.

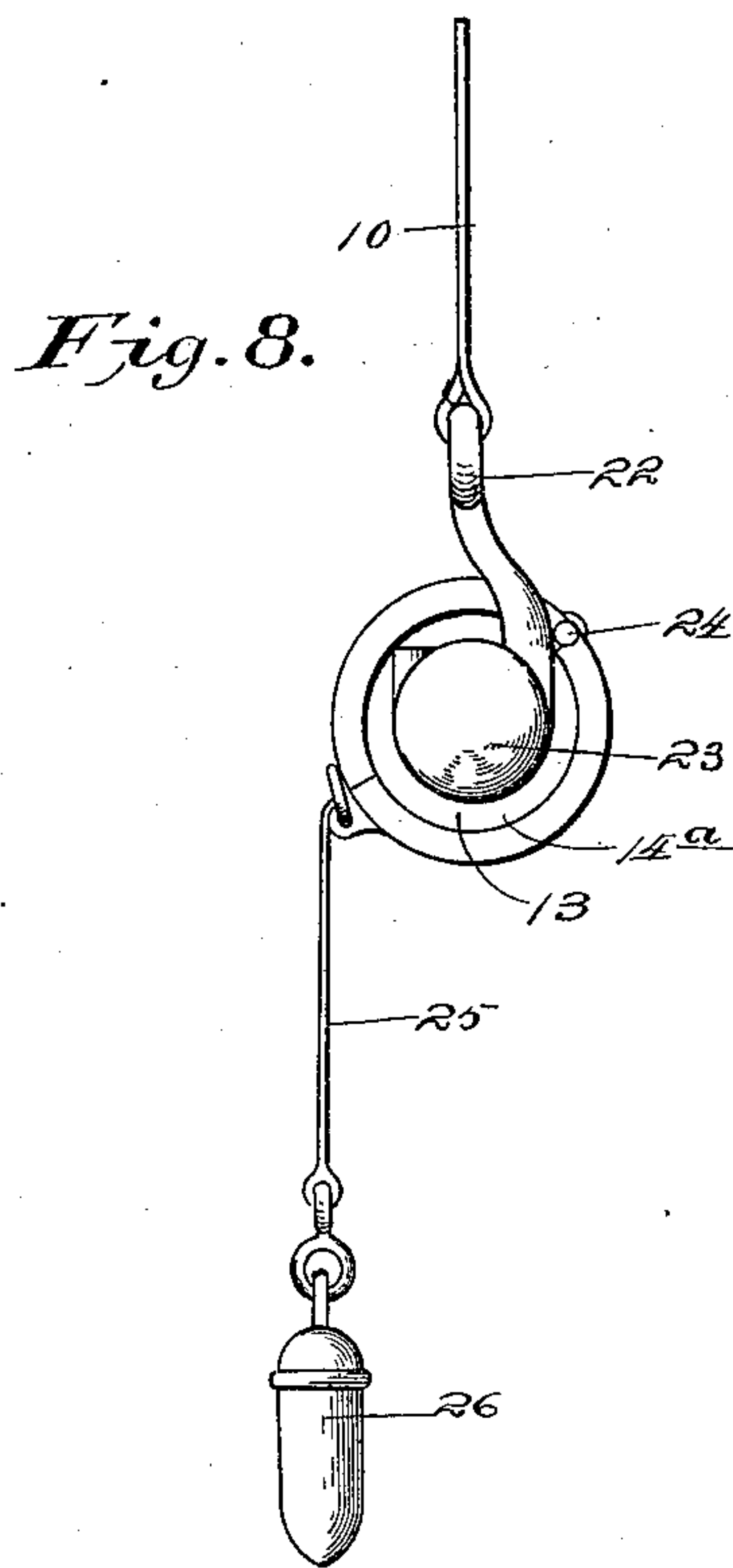
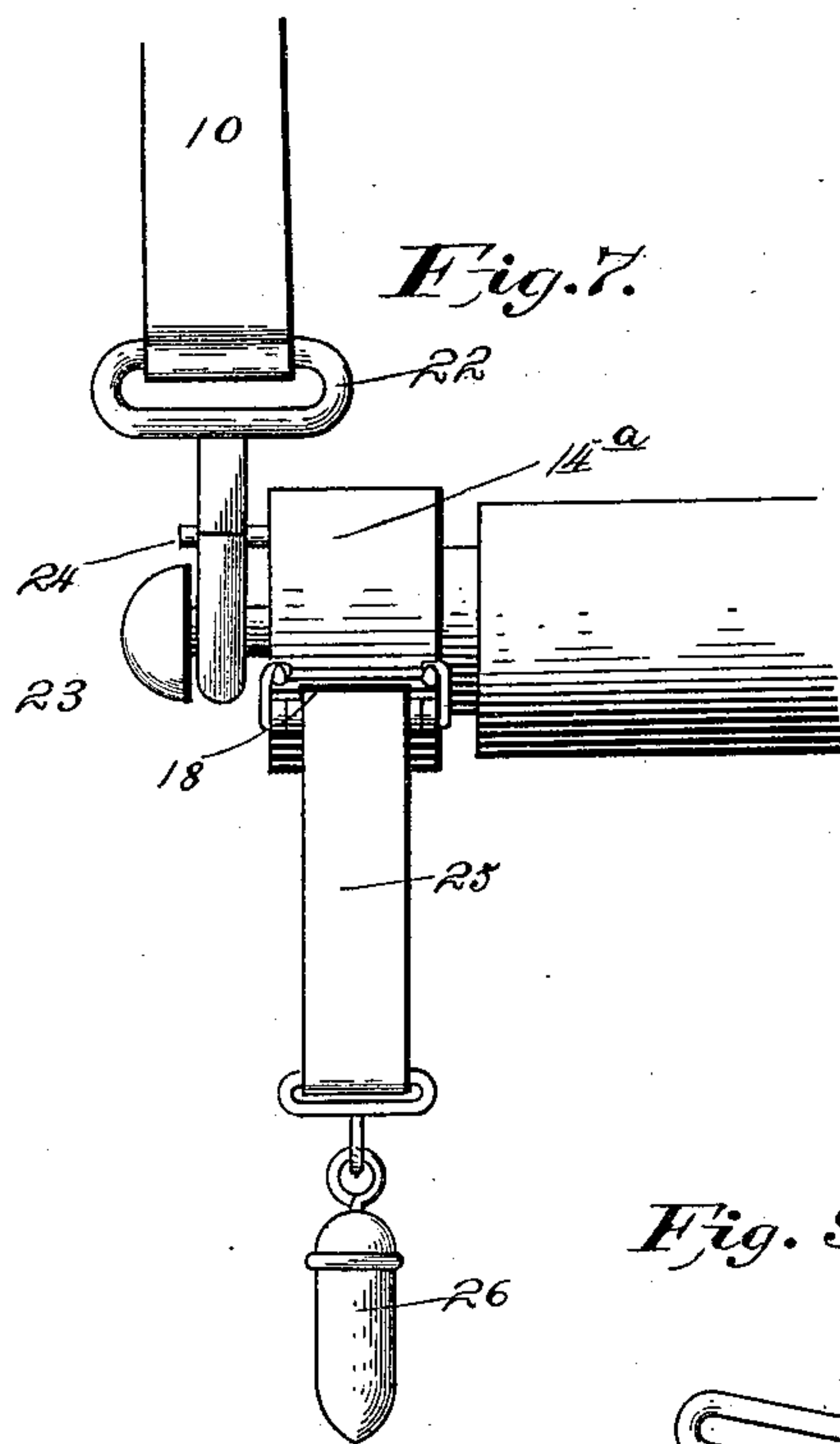
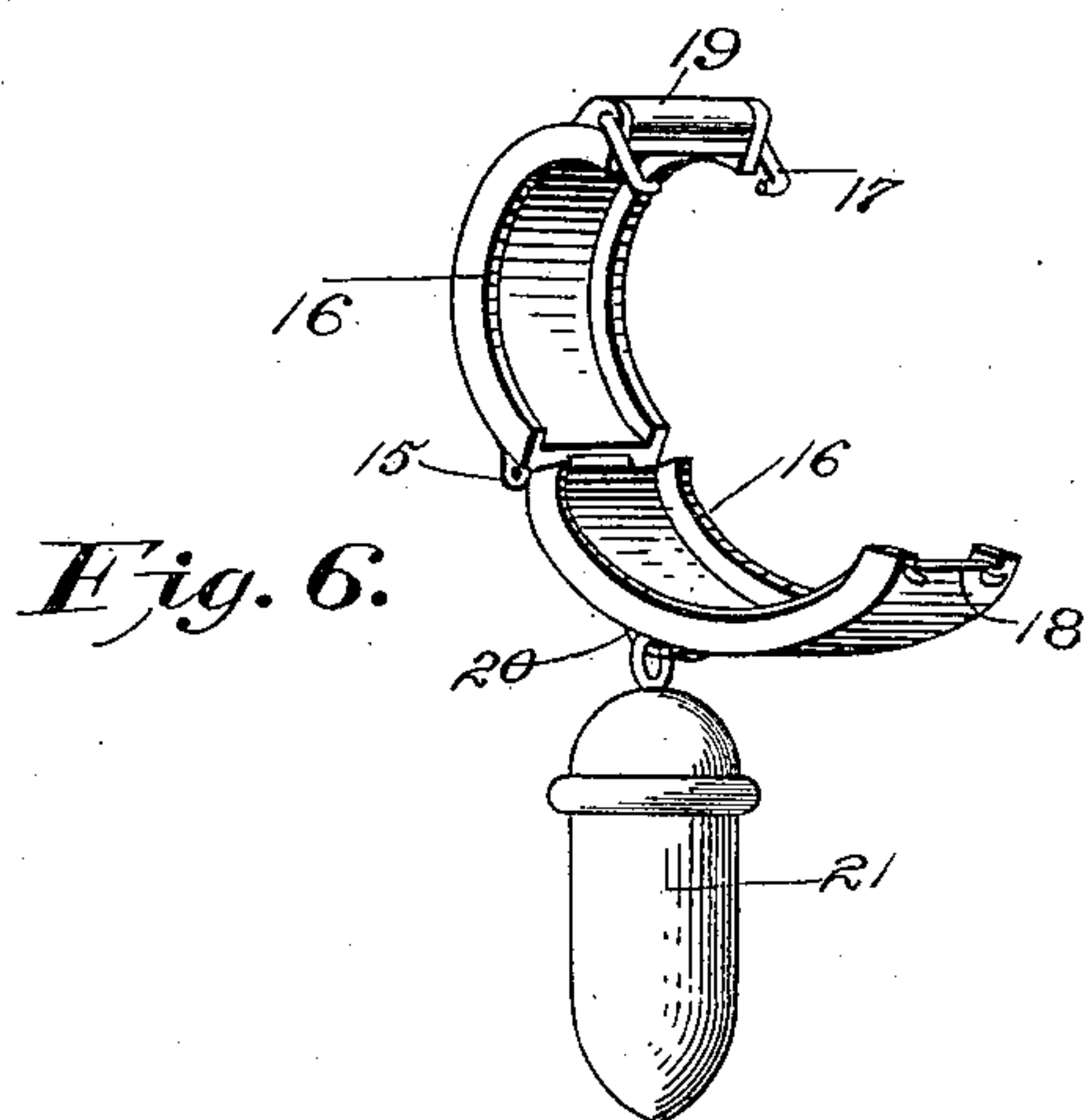
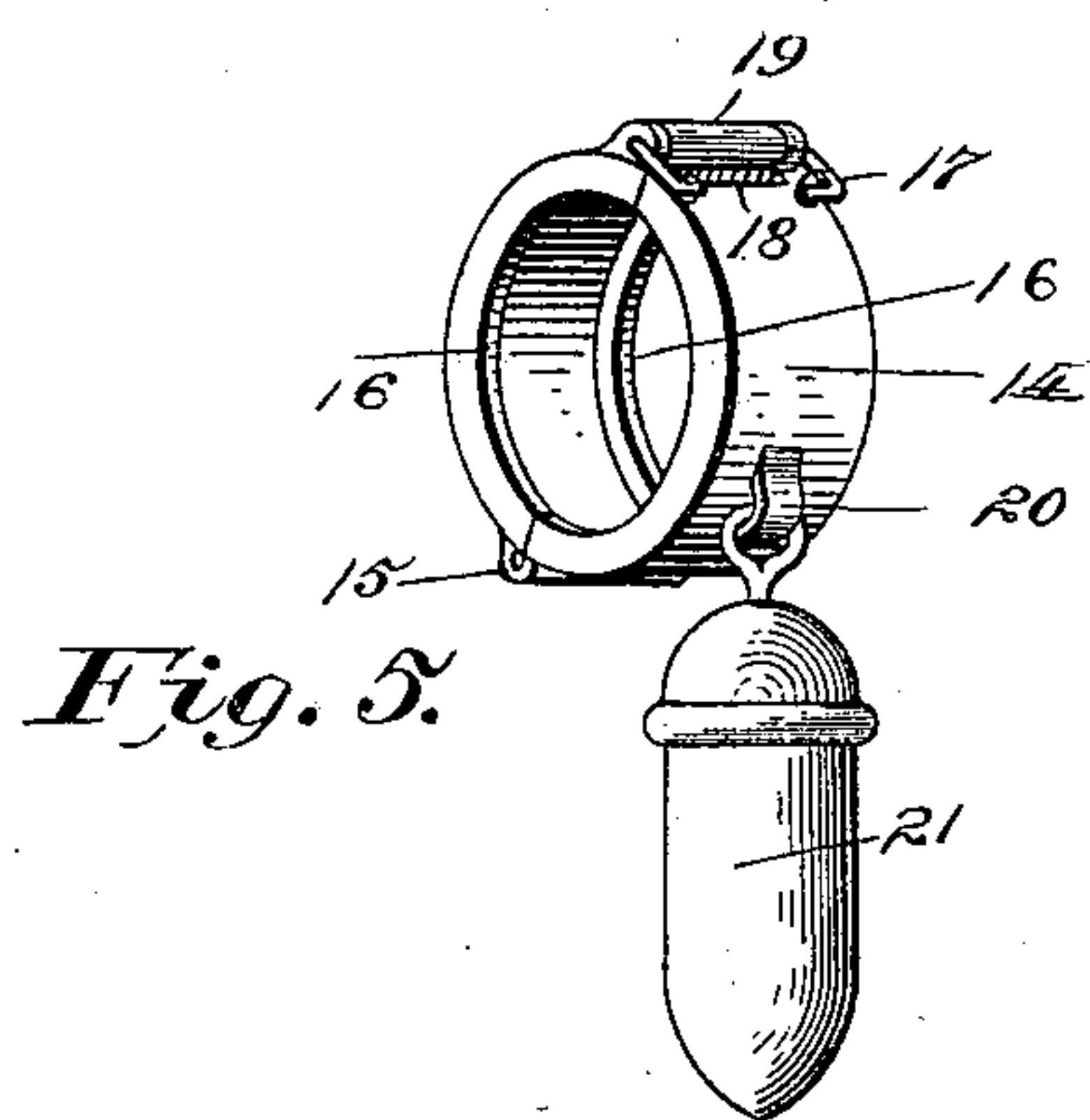
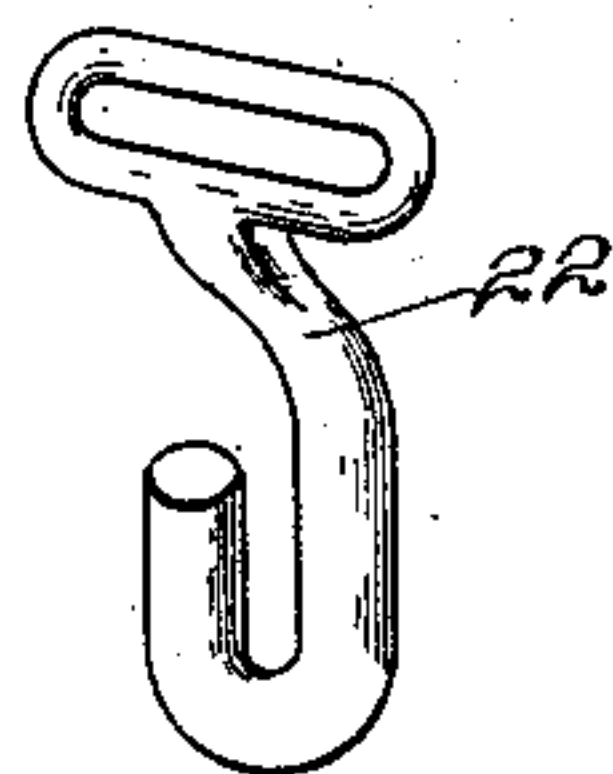


Fig. 9.



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# UNITED STATES PATENT OFFICE.

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## CURTAIN-FIXTURE.

SPECIFICATION forming part of Letters Patent No. 618,746, dated January 31, 1899.

Application filed February 11, 1898. Serial No. 669,967. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY M. STEVENSON, a citizen of the United States, residing at West Barnet, in the county of Caledonia and State of Vermont, have invented certain new and useful Improvements in Curtain-Fixtures; 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.

The object of my invention is to provide improved mechanism for mounting and operating a window-shade, by means of which the light may be admitted through the upper or lower parts of the window, or both, or may be shut off entirely.

The invention consists in the provision of two rollers, one mounted on the window-frame and the other suspended therefrom, the shade being attached to the lower of said rollers, and a friction-clutch loosely mounted upon the ends of the shade-roller provided with a stop adapted to engage the suspending means to prevent the unwinding of the shade.

The invention also consists in other details of construction, combinations of parts, and arrangements of instrumentalities, which will be hereinafter more fully described and claimed.

In the drawings forming part of this specification, Figure 1 is a front elevation illustrative of my invention, showing the shade in such position that light may be admitted through the upper and lower parts of the window. Fig. 2 is a vertical section on the line *xx* of Fig. 1. Fig. 3 is a detail view of one end of the shade-roller, showing the suspending-tape attached thereto. Fig. 4 is a similar view of the same with the friction-clutch applied. Fig. 5 is a detail perspective view of the friction-clutch in its closed position. Fig. 6 is a similar view of the same in its open position. Fig. 7 is a front elevation of one end of the shade-roller, showing a modified form of the invention. Fig. 8 is a view at right angles thereto, looking at the opposite end of the roller from that which is shown in Fig. 7. Fig. 9 is a detail view of the hook or stirrup employed in the construction shown in Figs. 7 and 8.

Like reference-numerals indicate like parts in the different views.

Mounted in suitable brackets 1 1 upon the upper cross-bar 2 of the window-frame is a roller 3, having parallel flanges 4 4, arranged in pairs at opposite ends thereof and provided with a ratchet-wheel 5, engaged by a pivotally-mounted gravity-actuated pawl or dog 6. The said pawl 6 has secured to it a curved overhanging arm or lever 7, provided with an eye or loop 8 in its outer end, through which an operating-cord 9 passes, the lower free end of said cord being provided with a tassel or other ornamental handle and the upper end thereof being secured to and adapted to be wound upon the roller 3. The object of the curved rod or lever 7, with the loop 8 in the end of it, is to enable the pawl 6 to be released from the ratchet-wheel 5 by drawing outwardly upon the operating-cord 9.

Secured to the roller 3, between the flanges 4 4, are suspending tapes or bands 10 10, the lower ends of said bands being secured to the shade-roller 11, carrying the shade 12, which is secured to and adapted to be wound thereon. The opposite ends of the roller 11 are reduced, as shown, and are provided with guide-flanges 13 13, between which the tapes 10 pass.

In connection with the foregoing parts I employ what I term a "friction-clutch" 14, the same being illustrated in detail in Figs. 5 and 6 of the drawings and shown applied in the other figures thereof. One of these clutches is used at each end of the shade-roller 11 and consists of two semicircular sections hinged one to the other, as shown at 15, provided with inwardly-extending flanges 16 at their opposite ends and provided with hooks 17, by means of which the free ends thereof may be locked together. Adjacent to the free ends of said sections one (or both) of the same is formed with a slot or opening 18, adjacent to which is an antifriction-roller 19. One of the sections of said clutch is further provided at a point intermediate of the ends thereof with a loop 20, to which is attached a ball or weight 21. As above stated, one of said clutches is applied to each end of the roller 11, the same embracing the flanges 13 13 on said roller, with the side flanges 16 upon said



clutch fitting down upon each side of the flanges 13 13. The inner diameter of said clutch when the parts thereof are in their closed position is slightly greater than the diameter of the flanges 13, so that free movement of said clutch upon said flanges may be permitted.

When applied as shown in Fig. 2 of the drawings, the tape 10 passes loosely through the slot or opening 18 in the clutch 14, the lower end of said tape being permanently secured to the roller 11. The weight 21 forces the clutch 14 around, so that one edge of the slot 18 and the roller 19 bear against the tape 10 and act as a stop to prevent the unwinding of the tapes 10 or of the shade 12, attached to the roller 11.

The operation of my device is as follows: When it is desired to have the light admitted through the upper part of the window, the operating-cord 9 is grasped and drawn forwardly, releasing the pawl or dog 6 from its engagement with the teeth of the ratchet-wheel 5. The roller 11, carrying the shade 12, is then free to fall by gravity, unwinding the tapes 10 from the roller 3. When the shade has been lowered to the desired extent, the pressure upon the operating-cord 9 is released and the pawl or dog 6 is allowed to return by gravity to its normal position in engagement with the ratchet-wheel 5. If it be desired to have the upper end of the window closed and the lower end open, a reverse operation to that just described will be performed—that is to say, instead of permitting the operating-cord to play out and wind upon the roller 3 the same is drawn downwardly, winding the tapes 10 upon said roller. If it be desired to cut off the entrance of light from any part of the window, the shade is drawn downwardly, unwinding it from the roller 11. In doing this, however, said roller 11 is turned in such direction against the pressure exerted by the weight 21 as to wind the tapes 10 upon said roller and raise the same to its topmost position. When the pressure upon the shade 12 is released, the weight 21 returns the friction-clutch 14 to its normal position, with the stop thereon in frictional contact with the tapes 10, and prevents the further movement or unwinding of said tapes or of the shade 12. The shade may be wound upon the roller 11 by drawing outwardly and downwardly upon the operating-cord 9. This action raises the roller 11 and the shade carried thereby until it is brought into contact with the upper roller 3, when further upward movement of the roller 11 is prevented. The continued downward and outward movement of the cord 9 will cause the tapes 10 to unwind from the roller 11, and thereby rotate said roller in such direction as to wind the shade 12 thereon.

In Figs. 7, 8, and 9 of the drawings I have illustrated a modified form of my invention which it may be desirable to use under certain circumstances. The same differs from

the form heretofore described in that there is provided upon the lower end of the tape 10 a hook or stirrup 22, which embraces a headed pin or bolt 23 upon the end of the roller 11. The tape in this instance, it will be seen, is not attached directly to the roller 11, but is connected thereto so that rotation of said roller will be permitted without winding or unwinding the tape 10 thereon. The clutch 14<sup>a</sup>, of the same general construction as the clutch 14, has the pivot-pin 24, through which the two sections thereof are connected together, extended outwardly, so that it is adapted to engage the rear side of the stirrup 22, the said extension 24 serving as a stop to prevent the accidental rotation of the roller. The said clutch 14<sup>a</sup> is so disposed upon the roller 11 that the hinge between the two sections lies uppermost, and the slot 18 lies beneath the horizontal center thereof. Passing through the slot 18 and adapted to be wound upon the roller 11 is a tape 25, carrying a weight 26 upon its lower end. The operation of this form of my invention is as follows, it being understood that the tapes 10 are raised and lowered upon the roller 3 in the manner heretofore described: When it is desired to lower the shade 12, so that the lower portion of the window will be completely closed, said shade is grasped in the usual manner and drawn downwardly, this action winding the tape 25 upon the roller 11. When released, the weight 26 upon the lower end of the tape 25 will force the friction-clutch into the position shown in Fig. 8 of the drawings, with the stop 24, formed by the extension of the pivot-pin by which the two sections of the clutch are hinged together, in contact with the rear edge of the stirrup 22. Further rotation of the clutch 14<sup>a</sup> is thereby prevented and the outward or downward movement of the tape 25 effectually cut off. To raise the shade 12, however, it is merely necessary to draw upon the tape 25 in a substantially horizontal direction, which action will turn the roller 11 so as to wind the shade 12 thereon.

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

1. A shade-roller, suspending means therefor, and an unbalanced friction-clutch adapted to engage the suspending means.

2. A shade-roller, suspending means therefor, and an eccentrically-weighted friction-clutch adapted to engage the suspending means.

3. A shade-roller, suspending means therefor attached thereto, and adapted to be wound thereon, a clutch loosely mounted on said roller, a stop on said clutch, and a weight for holding said stop in engagement with the suspending means.

4. A shade-roller, suspending means therefor attached thereto, and adapted to be wound thereon, a clutch loosely mounted on said roller and provided with a slot through which said tape passes, a stop on said clutch, and a



weight for holding said stop in engagement with the suspending means.

5 5. The combination of a shade-roller, a pair of flexible supports therefor adapted to be wound thereon, friction-clutches loosely mounted on said roller and provided with slots through which said flexible supports pass, and a weight secured to one side of each of said clutches, as and for the purpose set forth.

10 6. The combination of a shade-roller, a flexible support therefor adapted to be wound thereon, a friction-clutch loosely mounted upon said roller, the same comprising a pair of pivoted sections adapted to be locked together and having an opening through which said flexible support passes, an antifrictional roller adjacent to said opening, and a weight secured to one of said sections intermediate of the ends thereof, as and for the purpose set forth.

25 7. The combination of a shade-roller, a pair of flexible supports attached to the ends thereof and adapted to be wound thereon, friction-clutches loosely mounted upon the ends of said roller, each comprising a pair of hinged sections adapted to be locked together, having an opening through which one of said flexible supports passes, and provided with side flanges which inclose the end of said roller, and a weight secured to one of said sections at a point intermediate of the ends thereof, as and for the purpose set forth.

35 8. The combination with a main roller mounted to turn in stationary brackets, of a supplemental roller carrying a shade, and

tapes connecting said main and supplemental rollers, and wound upon the latter in opposition to said shade, whereby, when the shade is unwound, said tapes will be wound upon said supplemental roller, as and for the purpose set forth. 40

9. The combination with a main roller mounted to turn in stationary brackets, of a supplemental roller, a shade attached to said supplemental roller and adapted to be wound thereon, supporting-tapes for the supplemental roller secured at their upper ends to the main roller and at their lower ends to the supplemental roller, and adapted to be wound on said supplemental roller in a reverse direction to that of the shade, and friction-clutches on said supplemental roller for preventing the accidental unwinding of said shade or said tapes, as and for the purpose set forth. 55

10. The combination of two rollers, one suspended from the other by flexible bands or tapes adapted to be wound upon each, means for operating the upper of said rollers, a shade secured to the lower of said rollers and adapted to be wound thereon in a direction opposite to that of the tapes, friction-clutches loosely mounted upon the ends of the lower of said rollers provided with openings through which said tapes pass, and weights on said clutches, as and for the purpose set forth. 65

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

HENRY M. STEVENSON.

Witnesses:

JOHN A. GIBSON,

THOMAS STEVENSON.