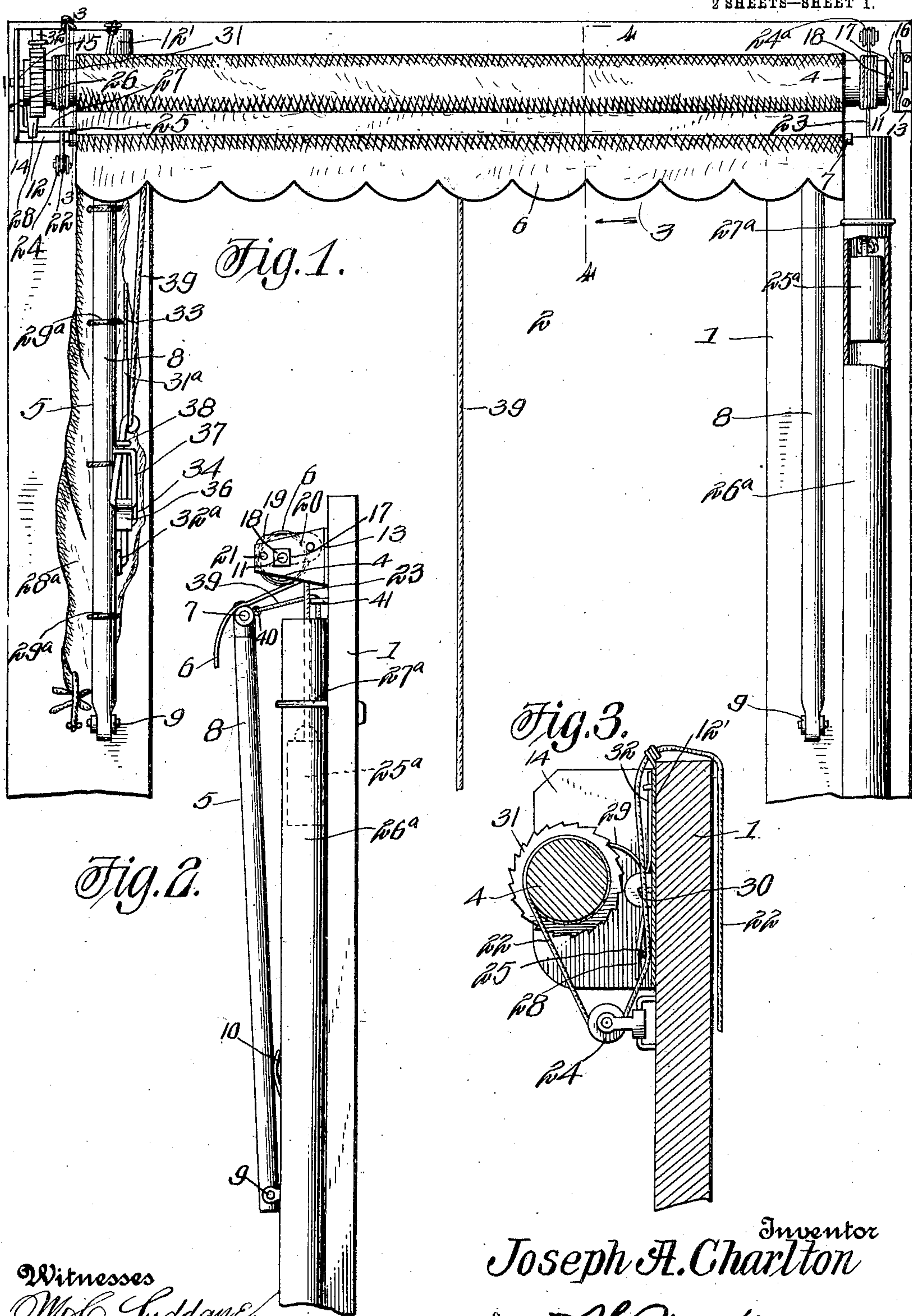


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AWNING.

APPLICATION FILED JULY 11, 1904.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

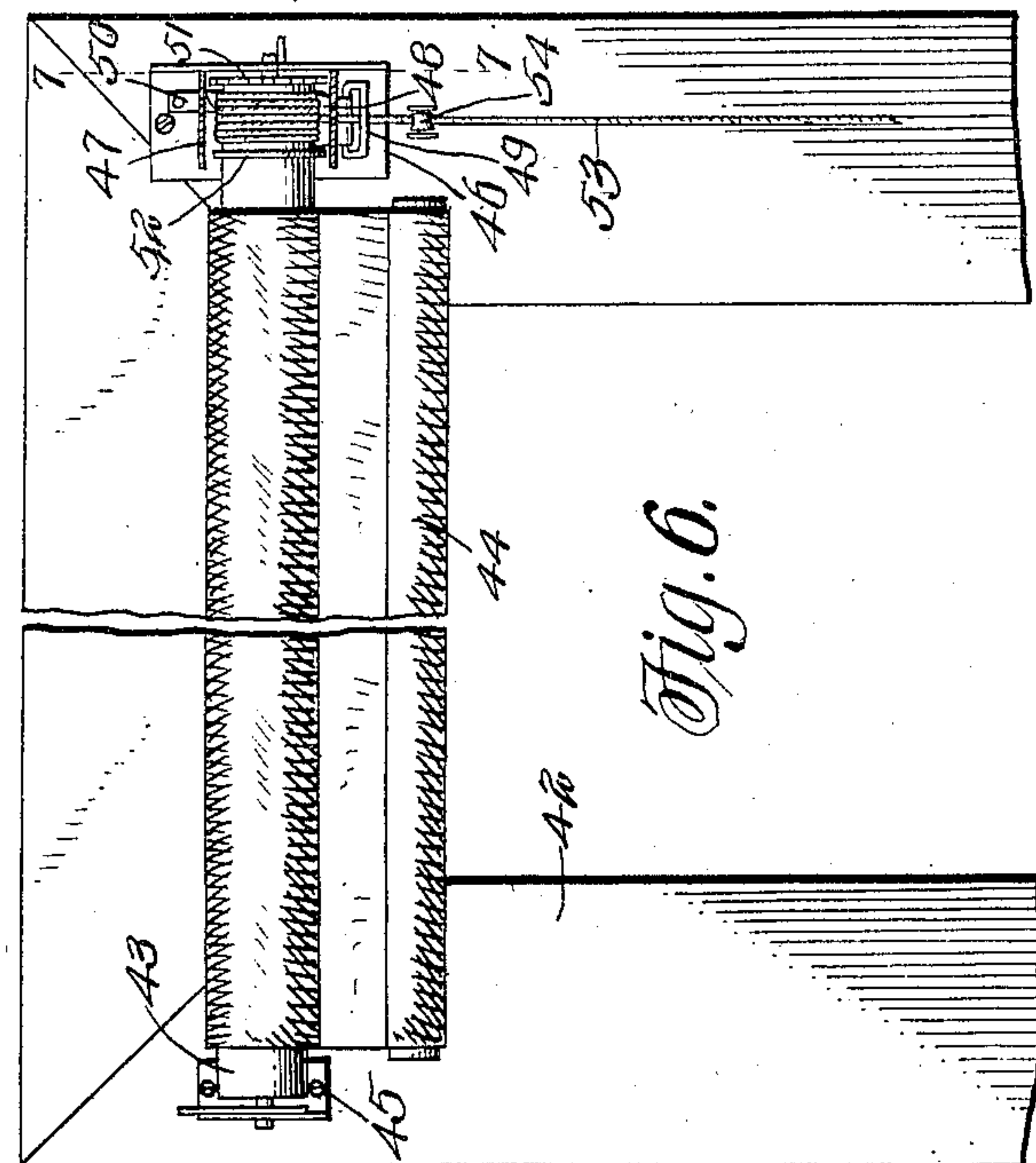


Fig. 6.

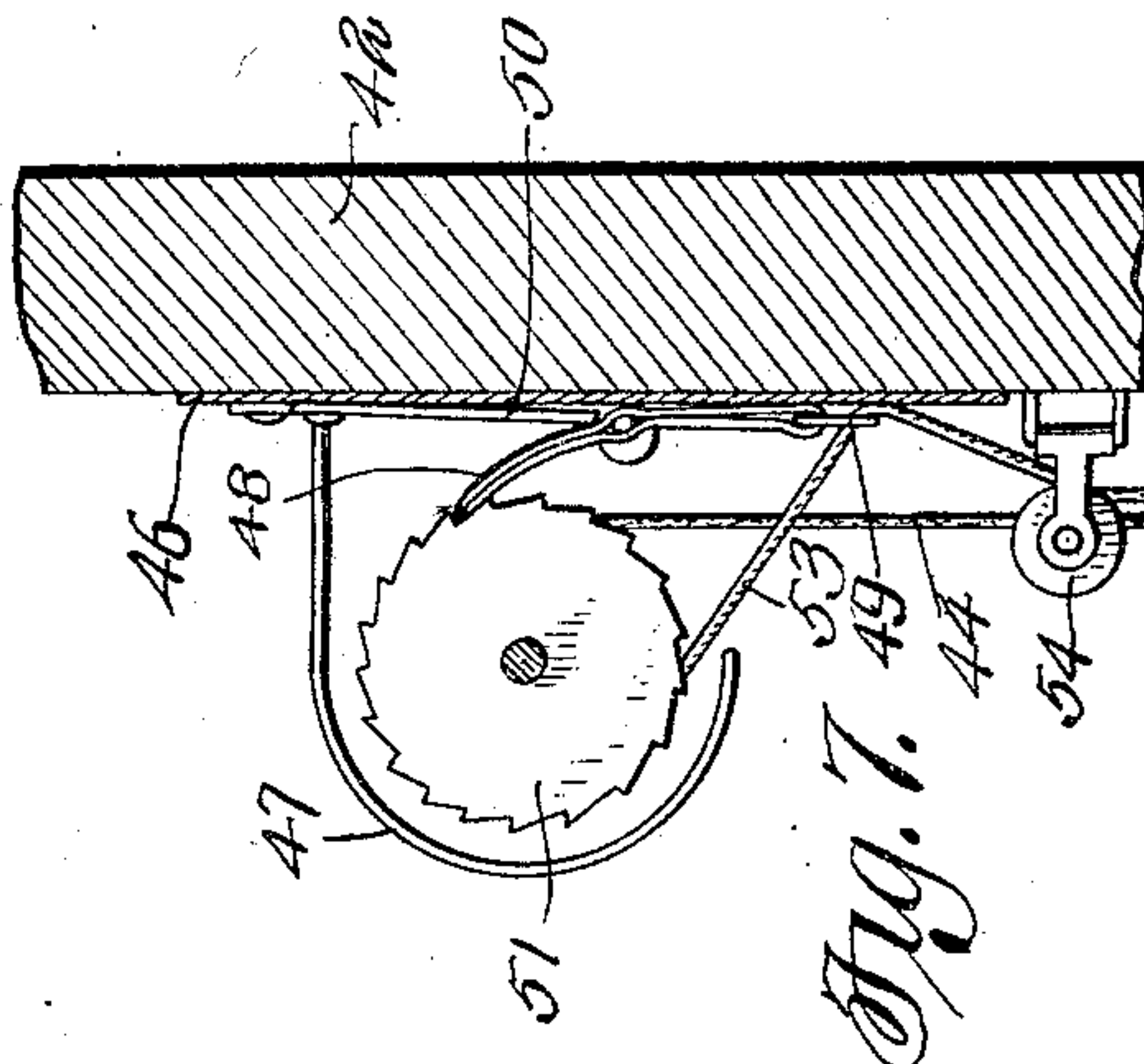


Fig. 7.

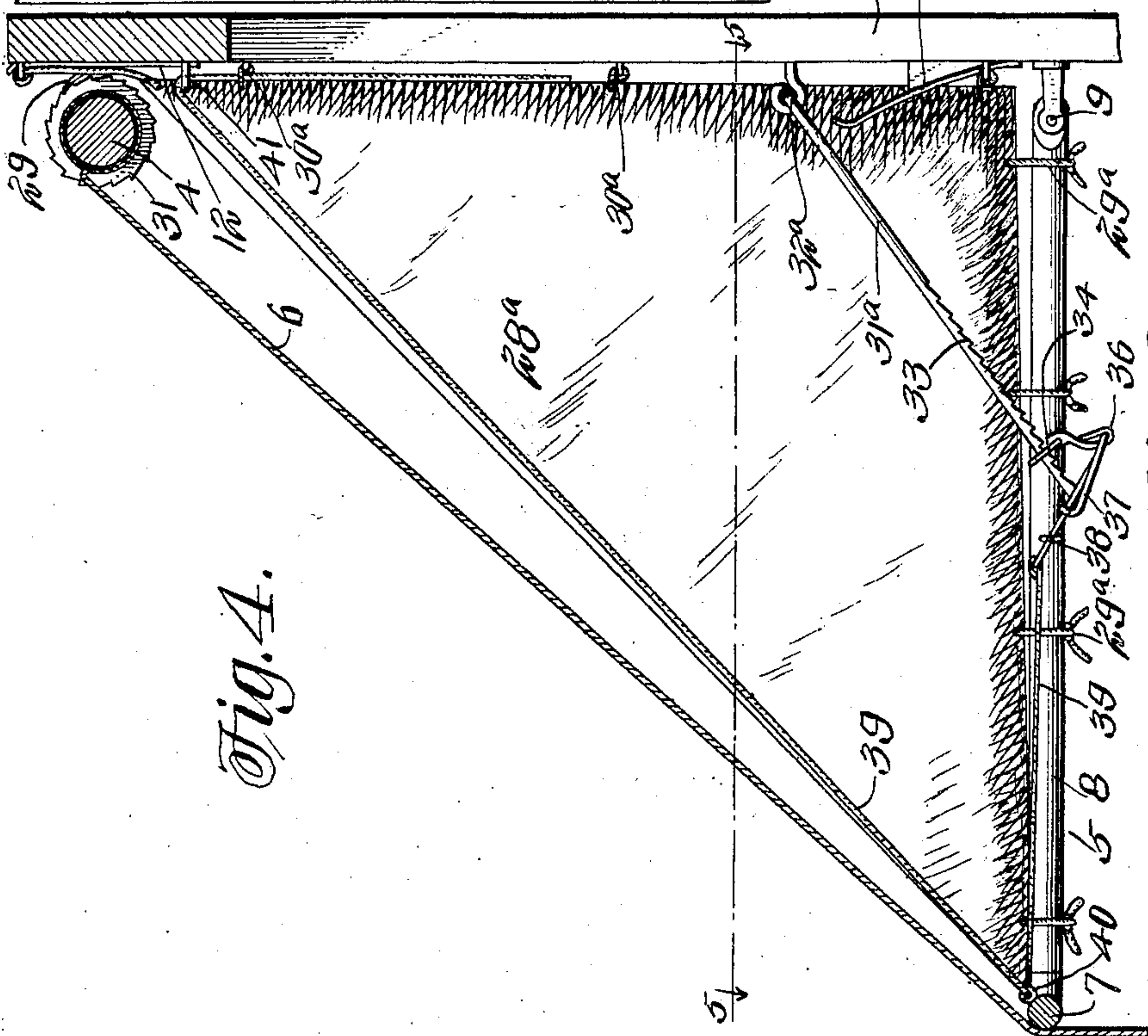


Fig. 4.

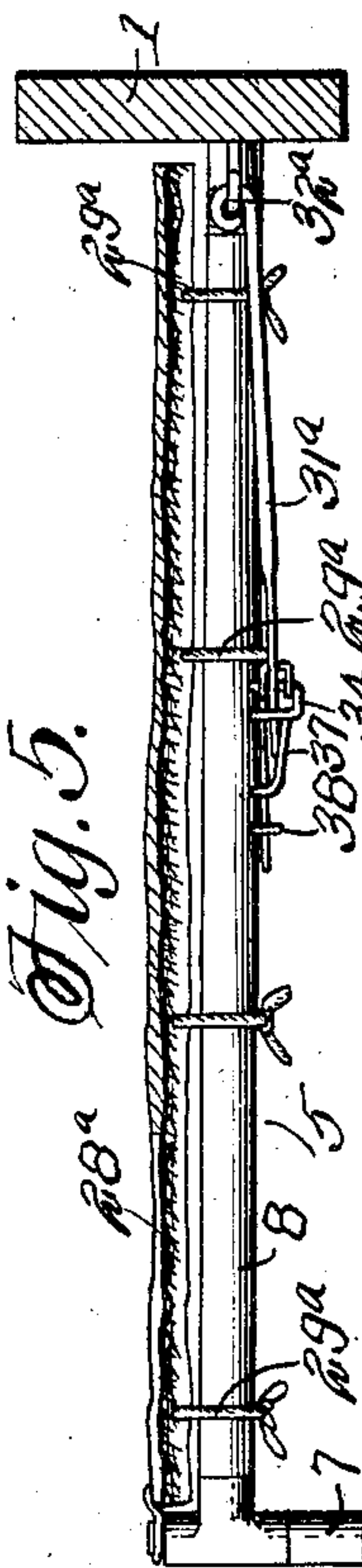


Fig. 5.

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UNITED STATES PATENT OFFICE.

JOSEPH AHLIN CHARLTON, OF HINTON, WEST VIRGINIA, ASSIGNOR OF
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AWNING.

SPECIFICATION forming part of Letters Patent No. 789,899, dated May 16, 1905.

Application filed July 11, 1904. Serial No. 216,138.

To all whom it may concern:

Be it known that I, JOSEPH AHLIN CHARLTON, a citizen of the United States, residing at Hinton, in the county of Summers and State of West Virginia, have invented certain new and useful Improvements in Awnings; and I do 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 improvements in awning-shades and curtains for windows and doors; and it consists in certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

The object of my invention is to improve and simplify the construction and operation of devices of this character, and thereby render them more efficient and durable in use and less expensive to manufacture.

The above and further objects, which will appear as the nature of my invention is better understood, I accomplish by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of my improved awning, showing the same in its elevated position. Fig. 2 is an end elevation of the same, the awning being in its elevated position. Fig. 3 is a vertical sectional view taken on the line 3 3 of Fig. 1. Fig. 4 is a vertical sectional view taken on the line 4 4 of Fig. 1, the awning being in its lowered position. Fig. 5 is a detail horizontal sectional view taken on the line 5 5 of Fig. 4. Fig. 6 is a front elevation of a window-frame, showing the application of my invention to a rolling window-shade. Fig. 7 is a vertical sectional view taken on the line 7 7 of Fig. 6.

Referring more particularly to Figs. 1 to 5, inclusive, of the drawings, the numeral 1 denotes the frame of a window, door, or the like, 2 the window or door opening, and 3 my improved awning. The latter comprises a roller 4, mounted upon said frame above said opening, a swinging arch-frame 5, and a flexible covering or awning proper, 6, which is

rolled upon said roller and has its front end secured to the upper portion 7 of said arch-frame. The two side arms 8 of said arch-frame have their lower ends pivotally mounted in brackets 9, so that as the covering 6 is rolled and unrolled upon the roller 4 said frame will be raised and lowered, as will be readily understood. Upon the frame 1, immediately above the brackets 9, are flat springs 10, which are adapted to bear against the inner faces of the arms 8 when the latter are in their raised or elevated position to force them outwardly and downwardly when the awning is being lowered. The roller 4 has in its ends journal-pins 11, which are mounted in bearings in brackets 12 and 13, secured upon the upper portion of the frame 1. The bracket 12 is in the form of a metallic plate 12', having a forwardly-extending arm 14 at its outer end, in which a bearing-opening 15 is provided to receive the journal-pin on the adjacent end of the roller 4. The bracket 13, which is secured upon the opposite side of the opening in frame 1, comprises a forwardly-extending arm 16, in the upper portion of which is formed a rectangular recess 17, adapted to receive a similar-shaped bearing-block 18, in which the journal-pin on the adjacent end of the roller 4 is mounted to rotate. The said block is retained in said recess by a latch 19, pivoted at its inner end and having its outer end formed with an opening which is adapted to register with alining openings formed in the outer end of the arm 16, and a plate 20, secured upon said arm. A pin or key 21 is passed through said alining openings to secure said latch in its closed position. The roller 4 is adapted to be rotated to wind the cover 6 upon it by means of a cord or other flexible connection 22, which is wound upon said roller in a direction reverse to that in which said covering is wound and has its inner end secured to said roller. The free end of said connection 22 passes under a pulley 24, mounted upon the frame 1, beneath the roller, then upwardly under a pivoted bail or lever 25, and then through a suitable opening in frame 1 to the inside of the building. Said bail or lever 25 is substantially U-shaped

and has its ends pivoted, as at 25, upon said bracket-plate 12'. The central and lower portion 27 of said bail or lever, beneath which the cord passes, hangs downwardly and is disposed beneath the lower downwardly-projecting end 28 of a dog or pawl 29. Said pawl is pivoted intermediate its ends, as at 30, upon the bracket 12 and has its upper end coacting with a ratchet-wheel 31, secured upon the roller 4, said upper end of the pawl being held normally in engagement with said ratchet-wheel by a flat spring 32, as clearly shown in Fig. 4 of the drawings. It will be seen that said pawl locks the roller against rotation to prevent the covering 6 from unwinding; but when said connection 22 is drawn upon it swings said bail and the lower portion of said dog upwardly, and thereby disengages the upper portion of said dog from the ratchet-wheel to permit the roller to be rotated to wind up the covering 6. As soon as said flexible connection 22 is released, however, the spring will force the pawl into engagement with the ratchet-wheel and instantly stop the rotation of the roller, and thus, the awning may be adjusted at any desired elevation. It will be seen if the flexible connection 22 is held sufficiently taut to hold the dog away from the ratchet and at the same time allowed to move the awning, which is actuated by a weight, as hereinafter described, will be permitted to lower or open, the flexible connection 22 winding upon the roller, as will be readily seen; but as soon as the flexible connection 22 is entirely released the spring will force the dog into engagement with the ratchet to lock the roller against rotation. While the flat springs 10 tend to cause the awning to open as soon as the roller is released, I preferably provide means for rotating the roller to unwind the cover 6 in order to render the awning more perfect in operation. Said means comprises a cord or other flexible connection 23, which is wound about said roller adjacent to one of its ends. One end of said connection 23 is secured to said roller, and its other end, after being passed around the guide-pulley 24^a, mounted upon the frame 1, carries a weight 25^a, which is adapted to slide vertically in a casing 26^a, secured upon the front of the frame 1, as shown at 27^a. Since the flexible connection 23 is wound about the roller 4 in a direction reverse to that in which the covering 6 is wound, it will be seen that as soon as the roller is released the weight will lower, causing the roller to unwind the covering, as will be readily seen upon reference to Fig. 2 of the drawings. If desired, I may provide side curtains 28^a at either one or both sides of the awning. Said curtains are triangular in form and have one of their edges secured to the arms of said arch-frame, as shown at 29^a, and another of their sides secured, as at 30^a, to the frame 1. The third side of said

triangular curtain is loose and when the awning is in its lowered position, as shown in Fig. 4 of the drawings, is adapted to extend along the under side of the covering 6 of the awning. In order to prevent the awning from being blown up by strong puffs of wind, I provide a locking means for securing the arch-frame in its lowered position. Said locking means comprises a ratchet-bar 31^a, which has one of its ends pivoted, as at 32^a, upon the frame 1 and its other end formed upon its under side with ratchet-teeth 33. Said outer end of the ratchet-bar projects through a U-shaped bail 34, secured upon one of the arms of the arch-frame, and the ratchet-teeth upon the said bar are adapted to engage the lower portion of said bail to prevent the arch-frame from being swung upwardly. In order to disengage said ratchet-teeth from the bail, I provide a curved plate 36, which has one of its ends pivoted upon the bail and its other end pivotally or loosely connected to an elongated eye or loop 37, constructed of wire and mounted to slide upon the said arm of the arch-frame in a bail 38, as shown. The curved plate is disposed beneath the front end of the ratchet-bar, which end projects through the said loop, so that when the loop is drawn upon to raise the curved plate the latter will swing the ratchet-bar upwardly and disengage its teeth from the U-shaped bail. In order to operate said loop, I secure to its forward end one end of a cord or other flexible connection 39, which is passed through staples or eyes 40 upon the outer portion of the arch-frame and also through an eye 41, secured upon the upper portion of the frame 1 above its opening 2. The lower end of the connection 39 hangs downwardly in the center of the window or door opening, as shown.

Referring more particularly to Figs. 6 and 7 of the drawings, in which I have shown my improvements applied to the ordinary window-shade roller, the numeral 42 denotes a window-frame, 43 a roller, 44 a curtain wound upon said roller, and 45 and 46 two brackets in which said roller is journaled. The brackets 45 and 46 are similar to the corresponding brackets previously described; but the said bracket 46 is provided with a curved cover or hood 47, as shown in Fig. 7. Upon the bracket 46 is pivotally mounted a pawl or dog 48, the lower end of which is provided with a swinging bail 49 and the upper end of which is forced by a spring 50 into engagement with a ratchet 51 upon the said roller 43. Upon said roller 43, between said ratchet and a guide ring or flange 52, is secured a cord or other flexible connection 53, which is wound in a direction reverse to that in which said curtain is wound. The free end of said connection 53 is passed inwardly under the bail upon said pawl or dog, then outwardly and downwardly around a pulley 54, mounted upon the frame 42. Said end of the cord may hang

downwardly upon one side of the window-frame or it may be passed horizontally around a suitable pulley mounted in the center of the frame, so that it will hang vertically in the front of the window-opening. It will be seen that when the curtain is in its lowered position and the flexible connection 53 is drawn upon the dog will be disengaged from the ratchet-wheel and the roller rotated, the cord being unwound from said roller while the curtain is being wound. When it is desired to lower the curtain or shade, the connection is held sufficiently taut to swing the lower end of the pawl outwardly to disengage its upper end from the ratchet-wheel, and the connection is allowed to slide upwardly through the guide-pulley and bail upon the pawl, so that the curtain or shade, which has its lower end weighted, will unwind, as will be readily understood.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

While I have shown and described the preferred forms of my invention, it will be understood that I do not wish to be limited to the precise construction herein set forth, since various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. In a device of the character described, the combination with a frame having an opening, a swinging arch mounted upon said frame, a covering for said arch, means for locking said arch in its lowered position, of a roller journaled on one side of said frame, above said opening, a flexible covering rolled upon said roller, a ratchet-wheel upon said roller, a spring-actuated pawl mounted upon said frame and coacting with said ratchet-wheel to lock said roller against rotation, a bail co-acting with said pawl and a flexible operating connection wound around said roller in a di-

rection reverse to that in which said flexible covering is wound, and having one of its ends secured to said roller and its other free end passed through said bail, whereby, when the free end of said connection is drawn taut, it will move said bail to disengage said pawl from said ratchet-wheel, substantially as described.

2. In a device of the character described, the combination with a frame having an opening, a swinging arch mounted upon said frame, a covering for said arch, means for locking said arch in its lowered position, of a roller journaled on one side of said frame above said opening, a flexible covering rolled upon said roller, a ratchet-wheel upon said roller, a pawl pivoted intermediate its ends upon said frame and having one end coacting with said ratchet-wheel to lock said roller against rotation, a spring for holding said end of the pawl in engagement with said ratchet-wheel, a bail or lever pivoted beneath the other end of said pawl, and a flexible operating connection wound around said roller in a direction reverse to that in which said flexible covering is wound, and having one of its ends secured to said roller and its other free end passed through said pivoted bail or lever, whereby, when the latter is drawn upon, said bail or lever will be swung outwardly to disengage said pawl from said ratchet-wheel, substantially as described.

3. In an awning, the combination with the frame of a window or door, a swinging arch mounted upon said frame, and a flexible covering secured to said arch, of means for locking said arch in its lowered position, said means comprising a bail secured to said arch, a ratchet-bar pivotally secured upon said frame and projecting through and engaging with said bail, a releasing member pivoted upon said bail, and an operating connection for said releasing member, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH AHLIN CHARLTON.

Witnesses:

HARVEY EWART,
J. M. CARDEN.