

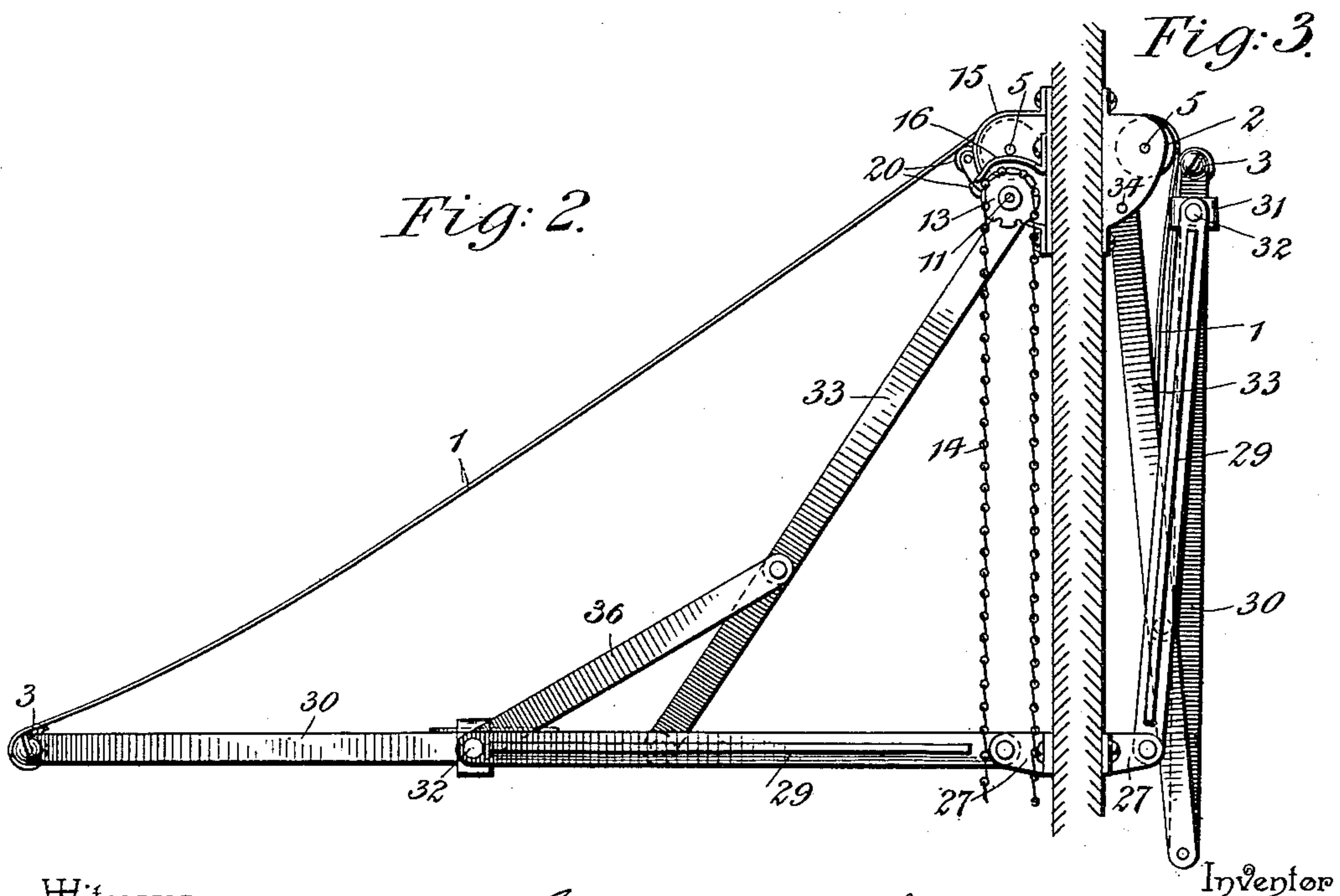
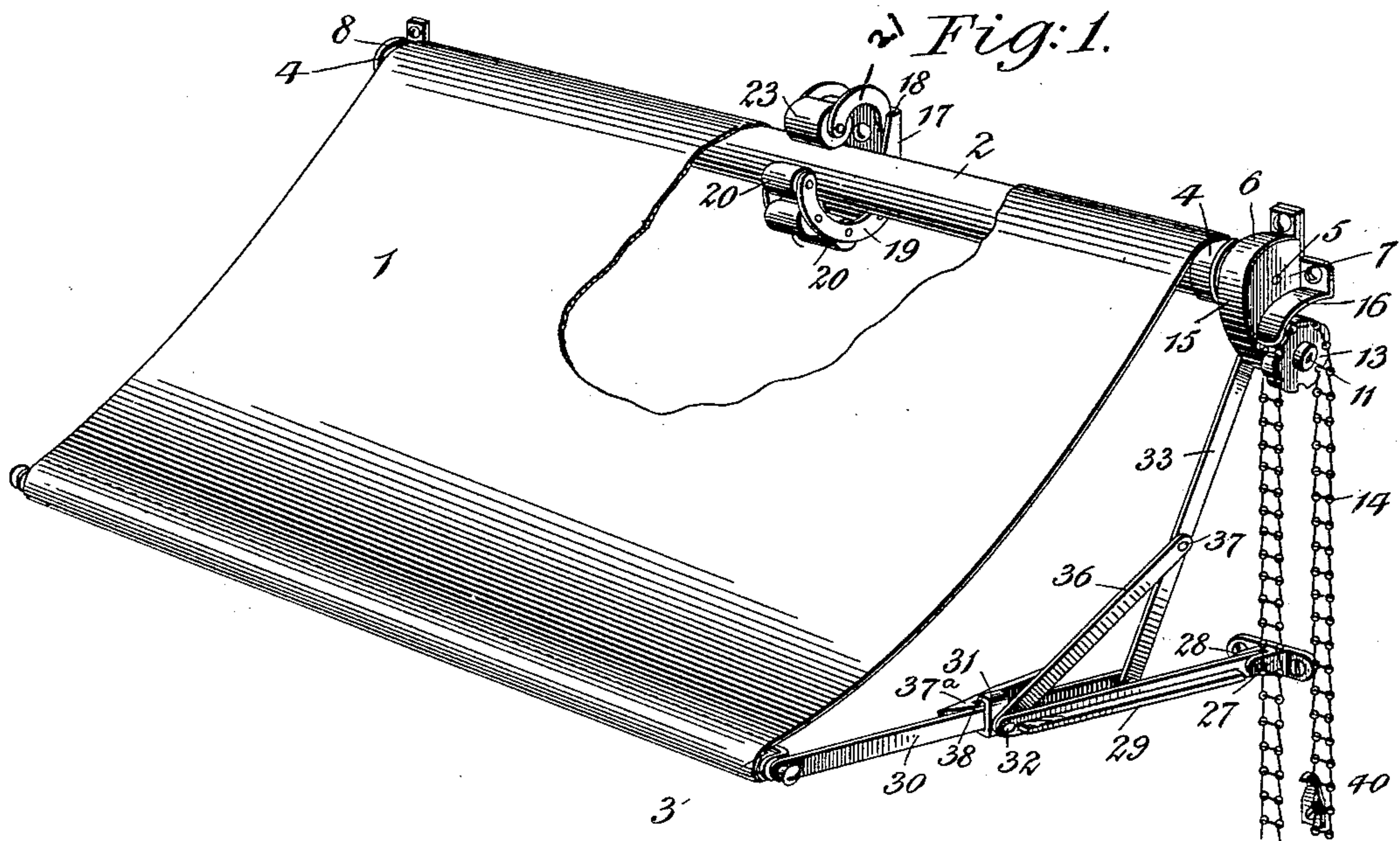
(No Model.)

2 Sheets—Sheet 1.

J. W. RICHARDS.
AWNING.

No. 602,772.

Patented Apr. 19, 1898.



Witnesses
John Rennie
Edwin Cruise

By *his* Attorneys, John W. Richards,
C. A. Snow & Co.

(No Model.)

2 Sheets—Sheet 2.

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AWNING.

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Fig: 4.

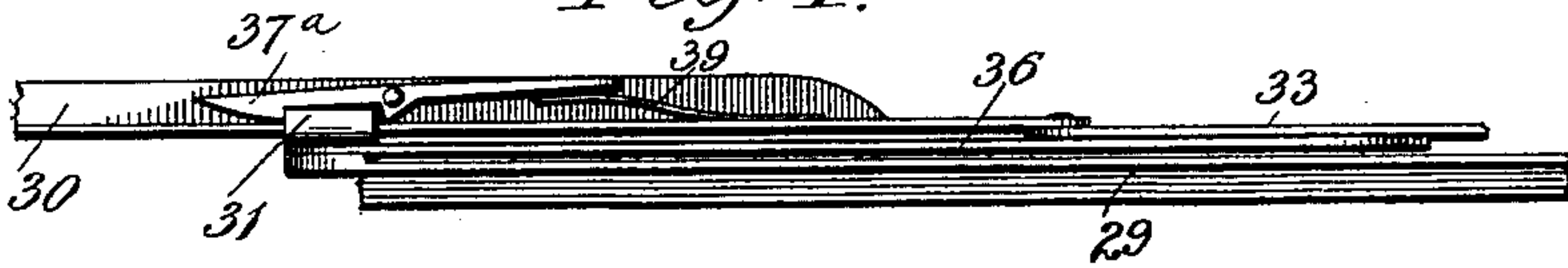


Fig: 5.

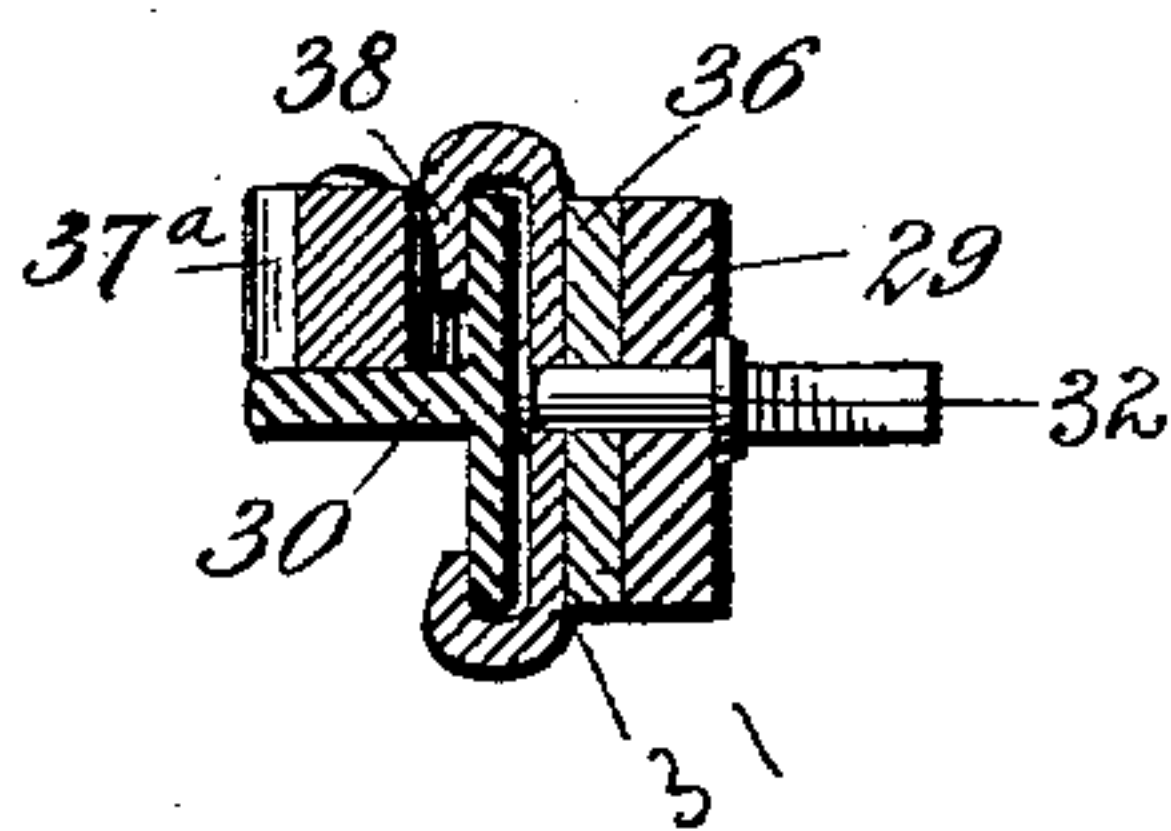


Fig: 6.

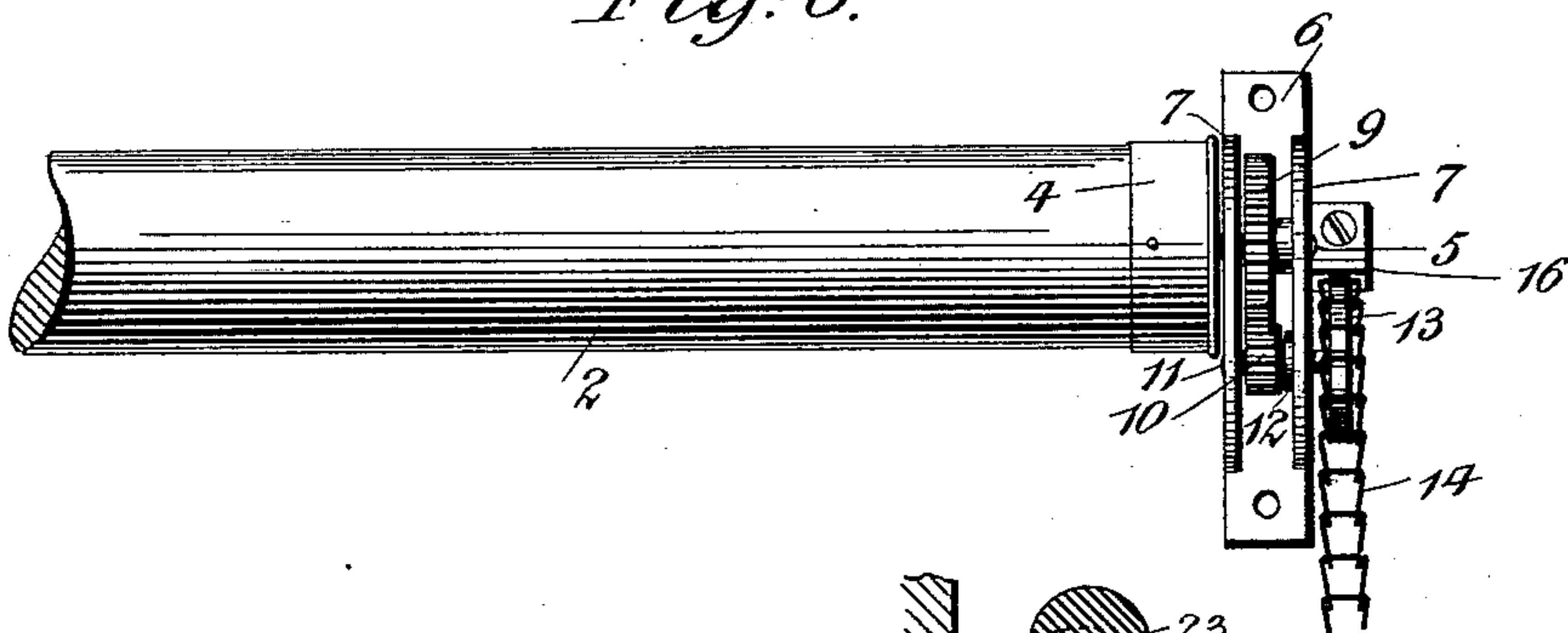


Fig: 7.

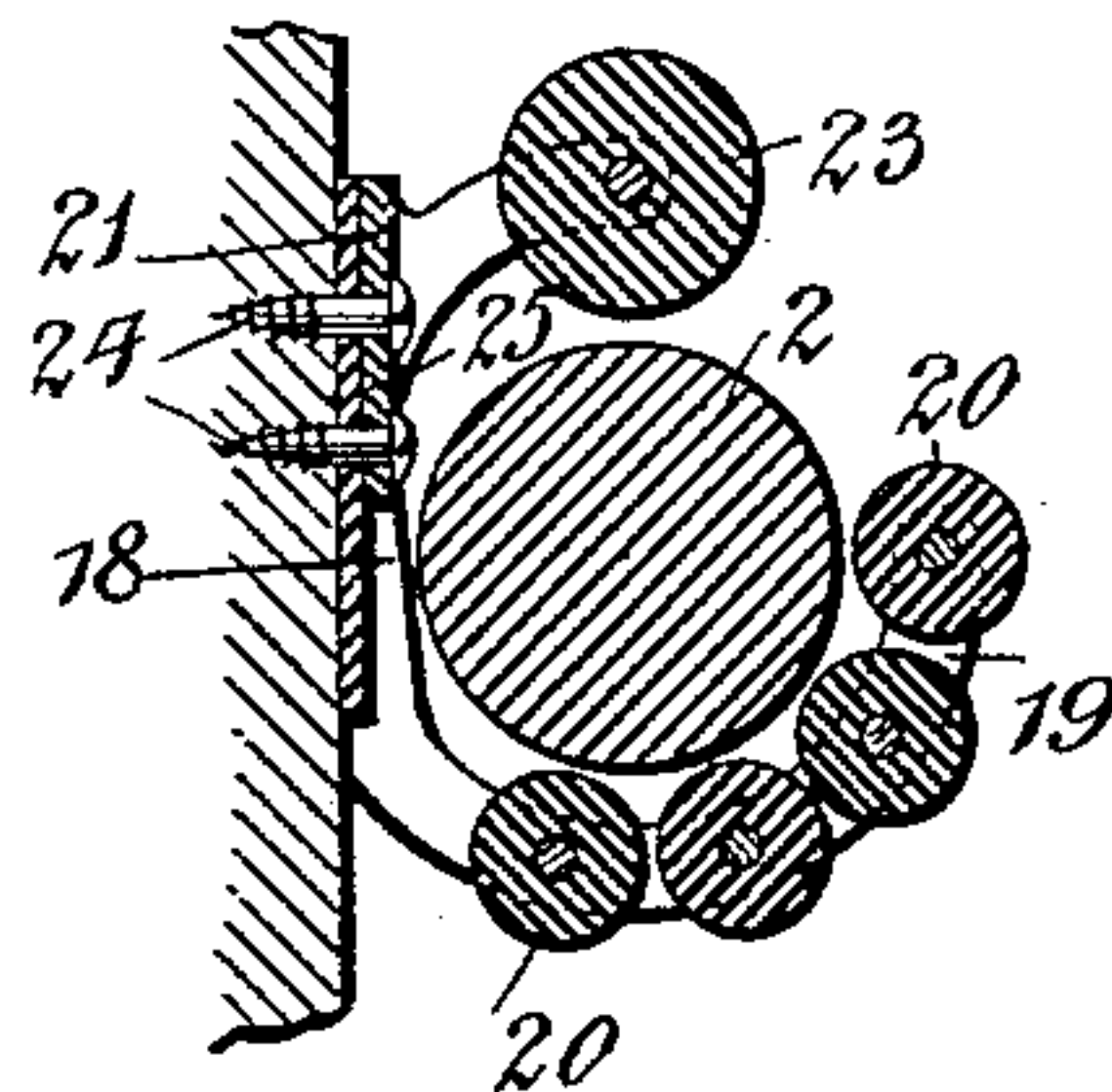
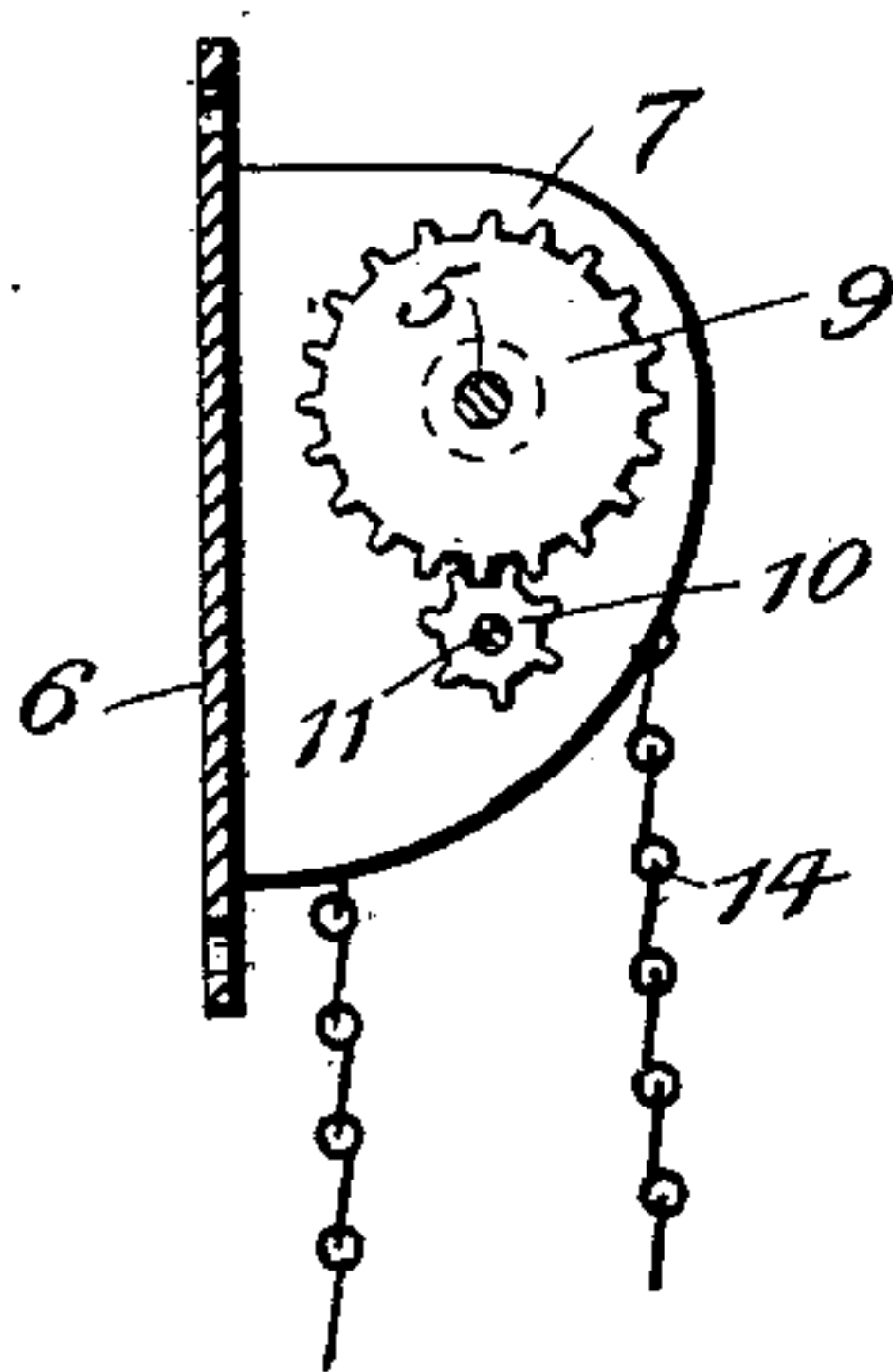
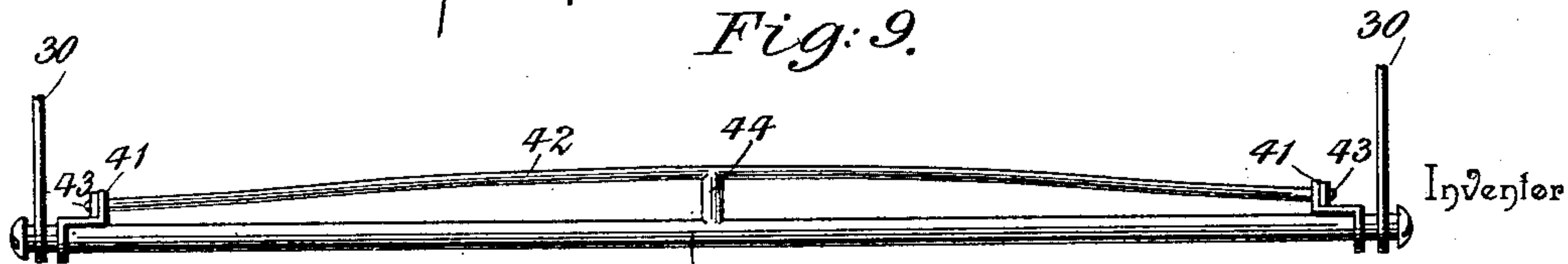


Fig: 8.

Fig: 9.



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UNITED STATES PATENT OFFICE.

JOHN W. RICHARDS, OF MUSCATINE, IOWA.

AWNING.

SPECIFICATION forming part of Letters Patent No. 602,772, dated April 19, 1898.

Application filed August 10, 1897. Serial No. 647,729. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. RICHARDS, a citizen of the United States, residing at Muscatine, in the county of Muscatine and State of Iowa, have invented a new and useful Awning, of which the following is a specification.

This invention relates to awnings, and particularly that class of store-awnings in which the awning-sheet is attached at its upper edge to a winding-roll and carried at its lower edge by a bar on the outer end of arms jointed to the building to swing vertically.

The object of the invention is to improve the construction of the swinging frame and also to provide improved devices for supporting and operating the winding-roll.

The invention will be fully described hereinafter and its novel features pointed out in the subjoined claims.

In the drawings, Figure 1 is a perspective view of the awning, part of the awning-sheet being removed to show the frame. Fig. 2 is an end view of the frame open. Fig. 3 is a similar view of the frame closed looking at the other end of the frame. Fig. 4 is a plan view of a portion of the frame, showing the locking device. Fig. 5 is a section on the line xx of Fig. 4. Fig. 6 is a front view of the roller-operating devices, the cover of the gear being removed and the roller broken away. Fig. 7 is a sectional view of the same. Fig. 8 is a sectional view of the supporting devices for the middle portion of the roller. Fig. 9 is a plan view of the front bar and its brace.

Similar reference-numerals indicate similar parts in the several figures.

1 indicates the awning-sheet, 2 the winding-roll, to which the sheet is secured at its upper edge, and 3 the front bar, to which the lower edge of the sheet is secured in any suitable manner. Each end of the roll is provided with a metal cap 4, which is firmly secured to it, and from each cap a spindle 5 extends.

6 indicates a bracket having forwardly-projecting spaced ears 7, in which ears one of the spindles 5 is journaled. 8 indicates a bracket in which the spindle 5 at the other end of the roll is journaled. These brackets will be secured to the building in any suitable manner. Between the spaced ears 7 of the bracket 6 a gear-wheel 9 is rigidly connected to the spindle 5, and immediately below this

gear-wheel a pinion 10 is journaled to mesh with the gear 9. The shaft 11 of the pinion 10 is journaled in the spaced ears 7 and projects outwardly beyond the outer ear. A washer 12 is fitted over the shaft 11, between the pinion 10 and the outer ear 7, in order to keep the pinion in engagement with the gear. On the projecting end of the shaft 11 is secured a sprocket-wheel 13, and an endless sprocket-chain 14 is hung on the wheel 13 and serves as a means to rotate the wheel, and thereby turn the winding-roll through the medium of the pinion and gear.

15 indicates a cap or cover adapted to fit around the edges of the spaced ears 7 and be removably secured to the bracket 6 in any suitable manner. This cap completely hides the gear 9 and pinion 10 and prevents the access of dust or other extraneous matter to the gearing.

16 indicates a cap or shield adapted to be secured to the building and to extend over the sprocket-wheel 13, and thereby afford a certain amount of protection to the sprocket-wheel, and prevents the accumulation of dirt or other substances on the upper part of the sprocket-wheel which might interfere with its free working.

17 indicates a bracket provided with flanges 18 on each side, and these flanges are continued from their lower ends to form spaced semicircular ears or arms 19, between which ears or arms a series of wooden rollers 20 are journaled. There may be as many of these wooden rollers in the series as desired, but ordinarily four will be sufficient for the purpose for which they are designed.

21 indicates a bracket similar to the bracket 17, except that it has no side flanges. The bracket 21 is reversely arranged to the bracket 17 and is provided with spaced semicircular ears or arms in which a single wooden roller 23 is journaled. The bracket 17 will be secured to the building by means of screws 24 or similar fastening devices, and the shank 25 of the bracket 21 will fit between the flanges 18 and be secured to the bracket 17 by a set-screw 26. The semicircular ears of the bracket will form a pocket in which the roll 2 will work, and the wooden rollers will engage the awning-sheet and keep it from coming in contact with the metal brackets, thereby preventing the brackets and awning from becoming rusty. The brackets will be so arranged

relatively to each other as to leave a space between them to permit the passage of the awning-sheet as it is wound on or unwound from the winding-roll 2. As the space between the ears 19 is open except for the rollers, no water can accumulate therein to keep the rollers wet.

The ends of the frame are constructed alike, and the description of one will therefore suffice for both.

27 indicates a bracket which is firmly secured to the building below the winding-roll and preferably in about the same horizontal plane as that which the lower edge of the awning will occupy when in its lowest position. This bracket is provided with spaced ears 28, between which the inner end of an arm 29 is pivoted, and this arm will preferably be a T-shaped bar arranged horizontally.

30 indicates an arm which is T-shaped in cross-section, with the stem of the T extending horizontally, and the outer end of this arm is connected to the end of the front bar 3.

31 indicates a slide which is supported to move freely on the arm 30, and from the outer face of this slide a pin 32 projects, which pin has a pivotal connection to the slide, and to the outer end of this pin the outer end of the arm 29 is secured.

33 indicates a lever pivoted at its upper end on a stud 34, which projects laterally from the bracket 6, and this lever is pivotally connected at its lower end to the inner end of the arm 30, as indicated at 35.

36 indicates a lever pivotally connected at its upper end to the lever 33 at a point intermediate its ends, as indicated at 37, and the lower end of the lever is pivoted on the pin 32 between the slide 31 and the arm 29. On the upper face of the horizontal flange of the arm 30 a hook-latch 37^a is pivoted intermediate its ends in such manner that its hook will engage the front edge of the turned-over flange 38 of the slide 31 when the frame is fully extended, and when in this position the arms 29 and 30 will be locked against longitudinal movement relatively to each other and the frame cannot be folded up. This hook is designed particularly to prevent the awning being lifted up by the force of the wind. A spring 39 engages the latch to normally hold it in engagement with the slide. When it is desired to wind up the awning, the hooks must be disengaged from the slide, when by operating the chain 13 the awning-sheet will be wound on the roller, and during this operation the slide 31 will move to the outer end of the arm 30, the levers 33 and 36 will fold together, and the arm 29 will swing up vertically until the several parts will assume the position shown in Fig. 3. When in this position, the chain 13 may be engaged with the hook 40 and the roll 2 will be locked against turning.

In order to strengthen and brace the front bar 3, an ear or lug 41 is firmly secured to it at each end and perforated for the reception of

the ends of a rod 42, which ends are threaded for the reception of nuts 43. This rod is slightly bowed and one or more struts 44 are secured at their opposite ends to the bar 3 and rod 42. The bar 3 is thus greatly strengthened and will not be liable to sag at its middle portion.

It will be understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what I claim is—

1. In an awning, the combination with the winding-roll carrying the awning-sheet, of a main bracket supported intermediate the ends of the roll in a fixed position and having a pair of arms 19, with an open space therebetween, and arched under the roll and extending to a point in front thereof, a plurality of wooden rollers arranged parallel with the winding-roll and having their spindle extremities journaled in said arms 19, a separate bracket having a shank or base portion seated within the main bracket and also provided with a pair of forwardly-extending arms arched over the winding-roll, a single roller supported between said forwardly-extending arms of the upper bracket and disposed in substantial alinement with the vertical center of the winding-roll, and fastening means for detachably securing the two brackets together, substantially as set forth.

2. In an awning-frame, the combination of the front bar, an arm pivotally connected at one end to the building and carrying a slide at its other end, a second arm connected at one end to the end of the front bar and working through said slide, a lever pivotally connected at its upper end to the building and at its lower end to the inner end of the second arm, a second lever pivoted at one end to the first lever intermediate its ends and at its other end to the said slide, and a spring-actuated hook to engage the slide and lock the frame against folding, substantially as described.

3. In an awning-frame, the combination of the front bar, an arm 29 pivotally connected at one end to a building, a second arm 30 slidably connected with the arm 29, a lever 33 pivotally connected at its upper end to a building and at its lower end to the inner portion of the arm 30, and a bar or lever 36 pivoted at one end to an intermediate point of the lever 33 and at its other end to the slidable connection between the parts 29, 30, and means to lock the parts against folding, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN W. RICHARDS.

Witnesses:

H. H. ARNOLD,
F. E. PARHAM.