No. 736,046. PATENTED AUG. 11, 1903.

M. F. WIEDEMANN.

AWNING OPERATING MECHANISM.

APPLICATION FILED MAR. 10, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

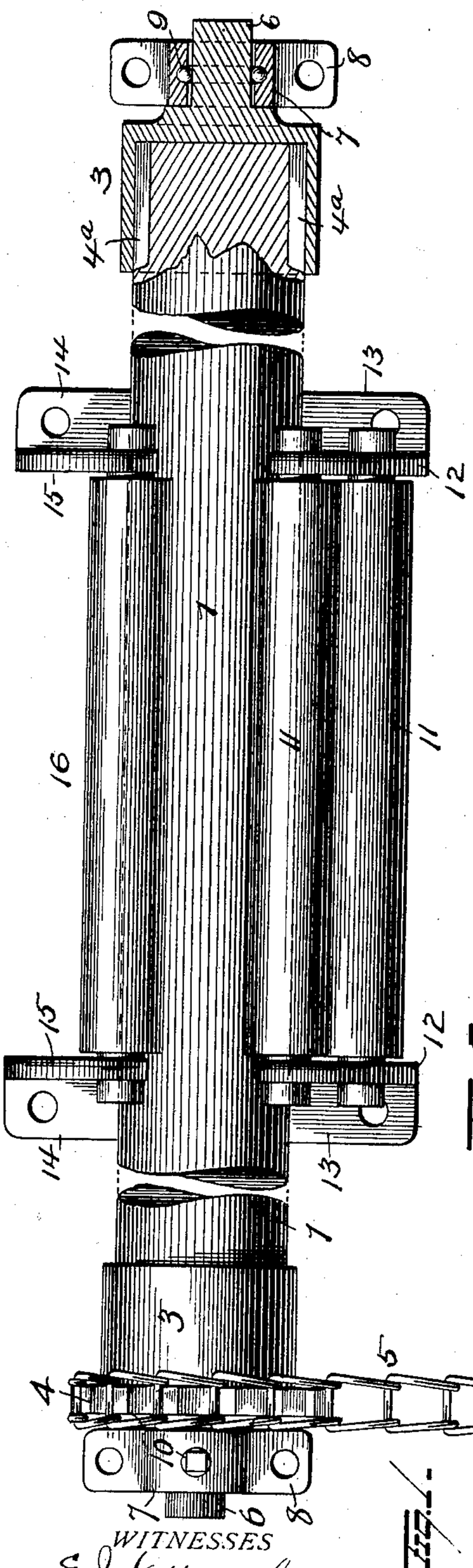
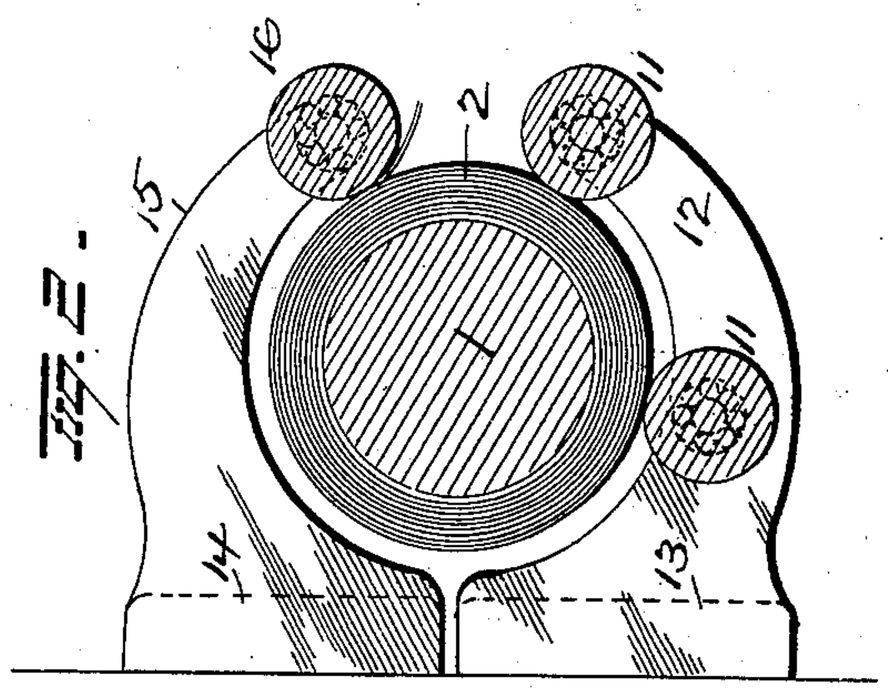


Fig. 2.



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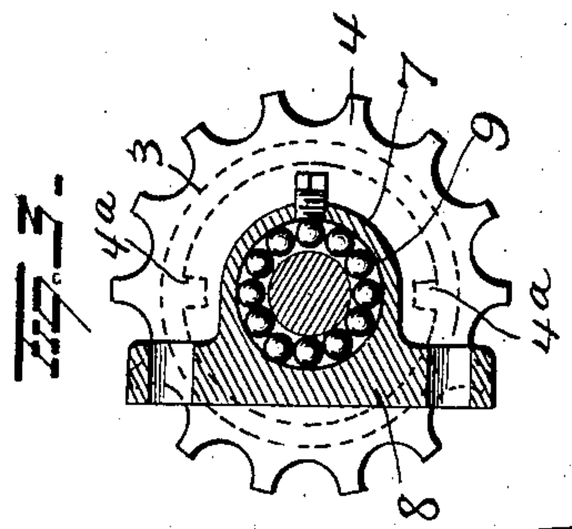


Fig. 4.

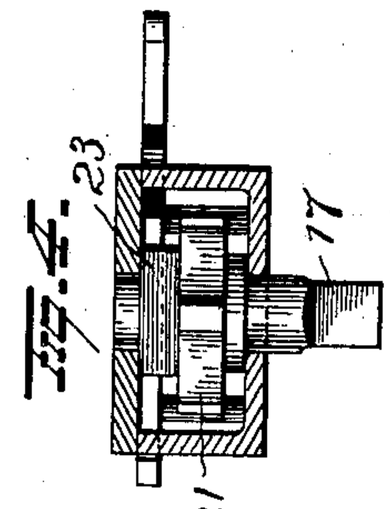


Fig. 5.

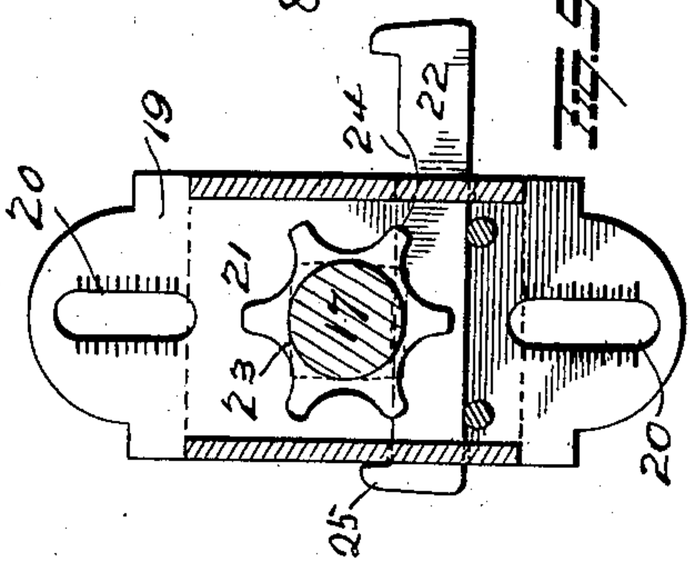
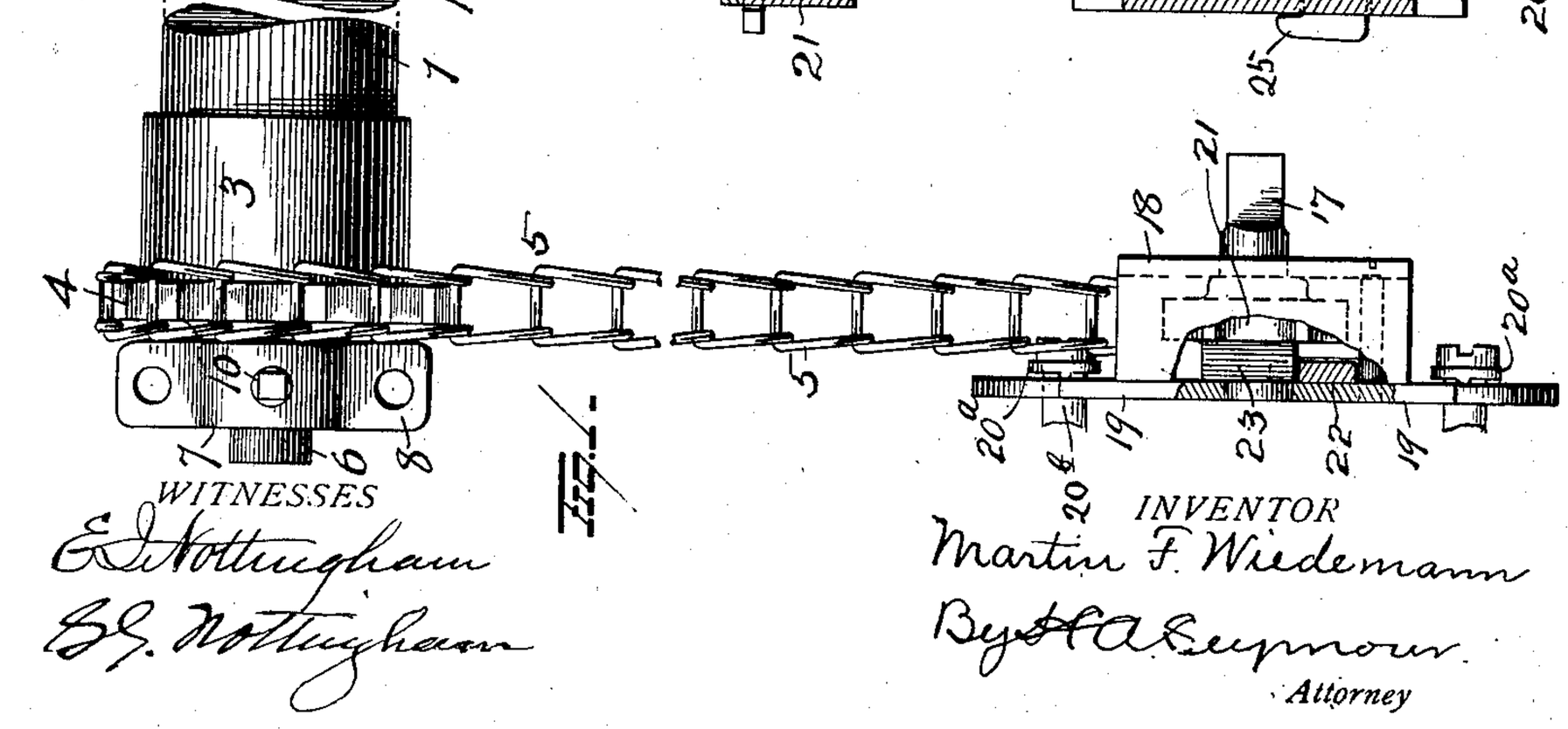


Fig. 1.



WITNESSES

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AWNING OPERATING MECHANISM.

APPLICATION FILED MAR. 10, 1903.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 6.

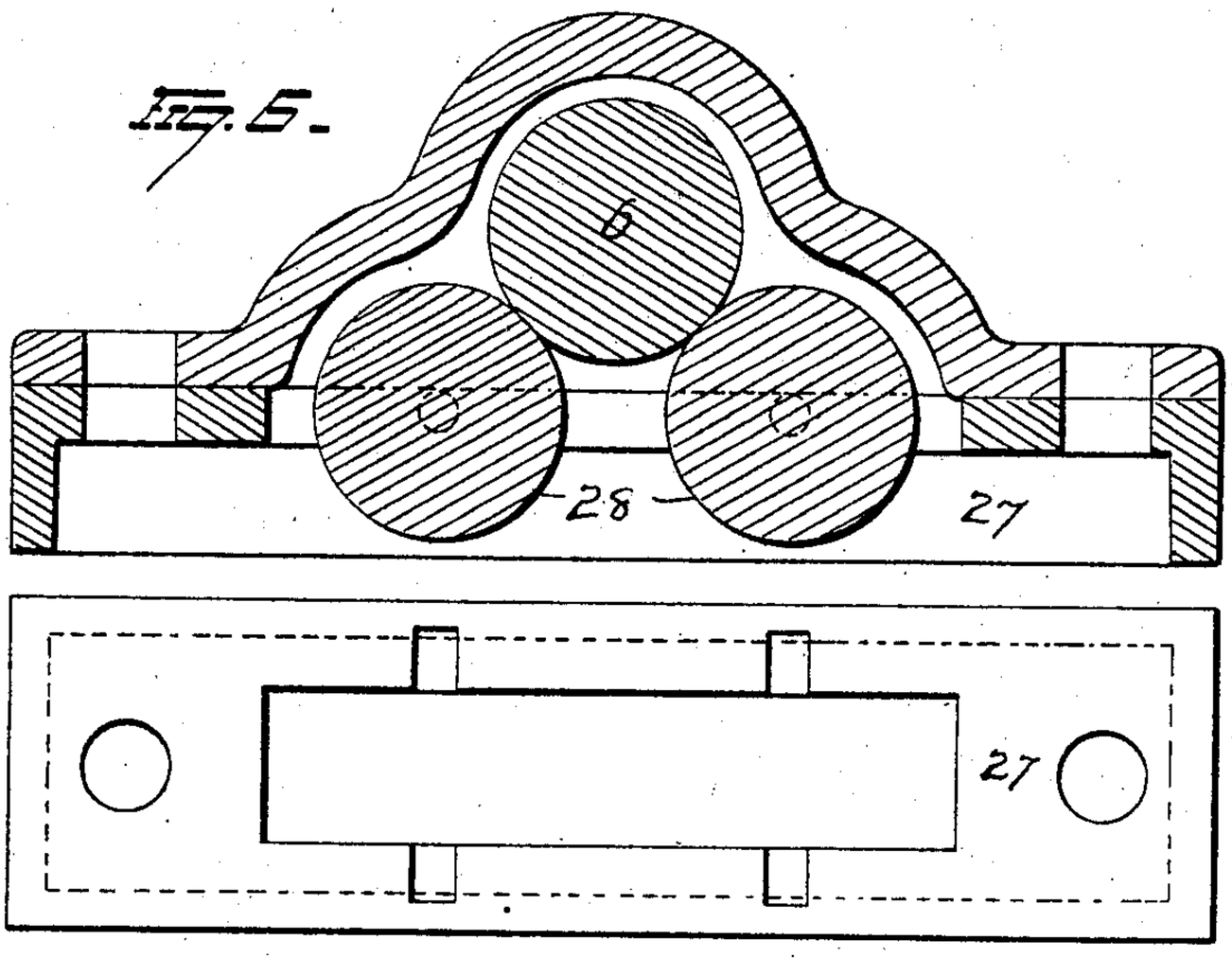
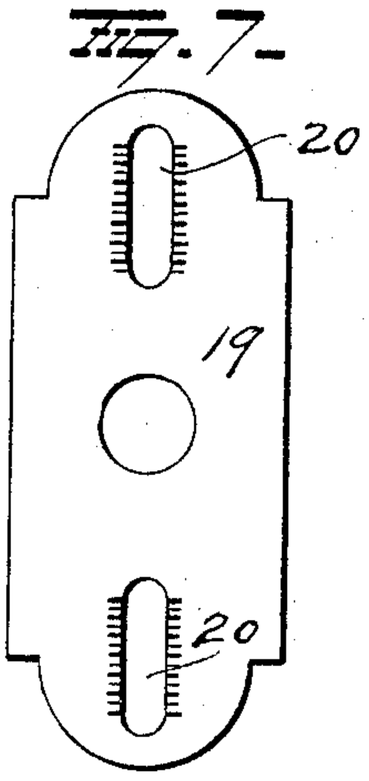


Fig. 7.



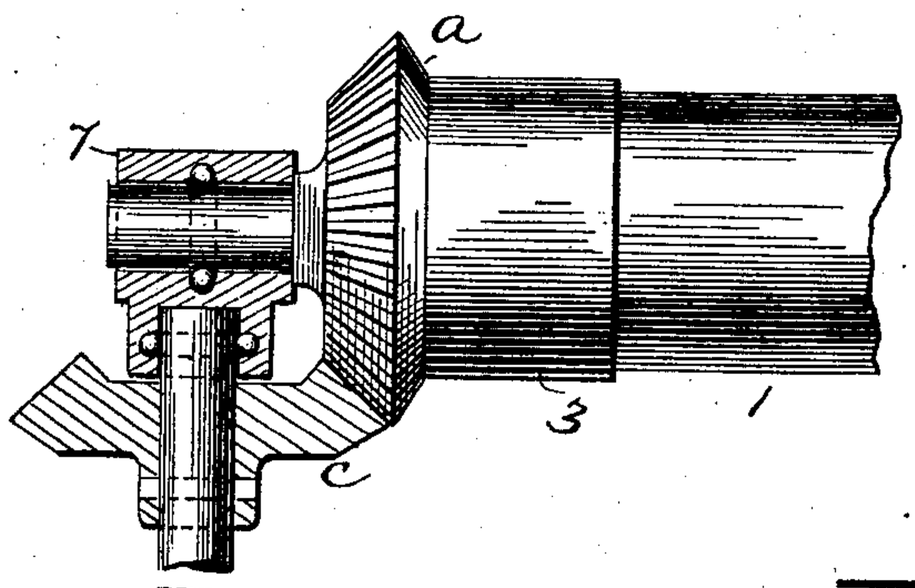


Fig. 9.

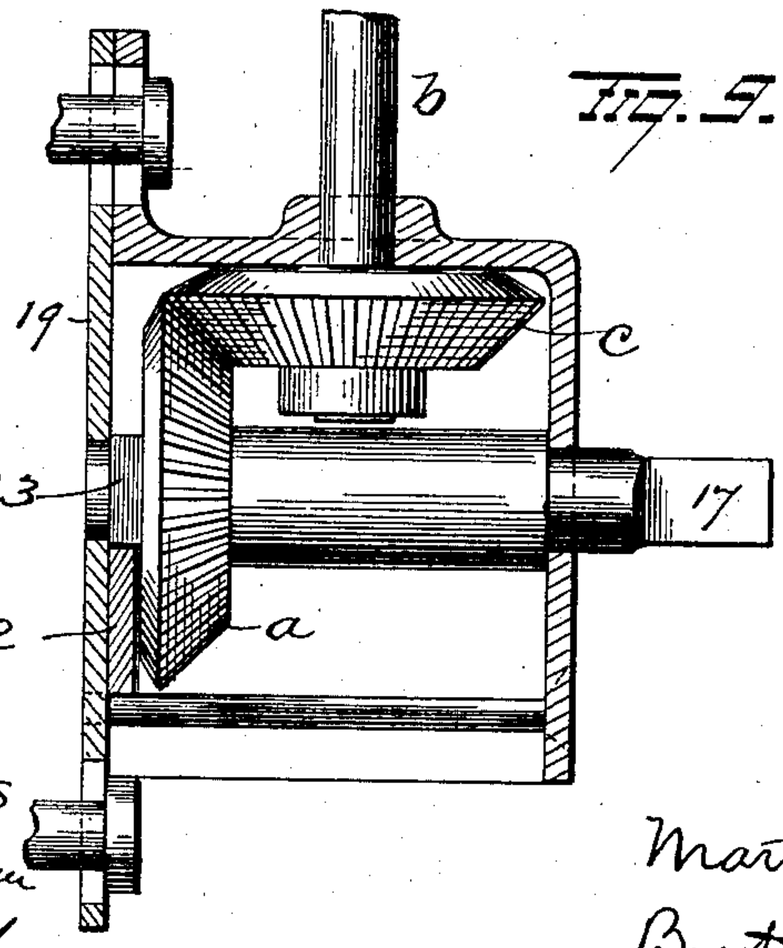
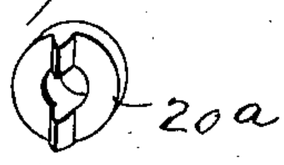


Fig. 8.



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No. 736,046. Patented August 11, 1903.

UNITED STATES PATENT OFFICE.

MARTIN F. WIEDEMANN, OF BURLINGTON, IOWA.

AWNING-OPERATING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 736,046, dated August 11, 1903.

Application filed March 10, 1903. Serial No. 147,121. (No model.)

To all whom it may concern:

Be it known that I, MARTIN F. WIEDEMANN, a resident of Burlington, in the county of Des Moines and State of Iowa, have invented certain new and useful Improvements in Awning-Operating Mechanism; 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.

My invention relates to an improvement in awning-operating mechanism, the object of the invention being to so support the awning pole or roller as to make the operation thereof extremely easy and provide improved means for operating the awning and locking it in any position to which it may be adjusted; and with these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation, illustrating my improvements. Fig. 2 is a view in section of the central support. Fig. 3 is a view in section of the roller end support. Figs. 4 and 5 are sectional views of the operating and locking devices proper. Figs. 6 and 6ª are detail views of a modified form of end roller-hanger. Fig. 7 is the plate 19. Fig. 8 is the washer 20ª, and Fig. 9 is a view illustrating a modified construction of transmitting mechanism.

1 represents the awning pole or roller, to which the awning 2 is secured and is adapted to roll or be wound thereon. This awning pole or roller 1 is of wood or metal, as preferred, and is housed at both ends in cylindrical metal cups 3, said cups having internal longitudinal flanges or keys 4 to enter grooves in roller 1 and compel the cups and roller to turn together. The cup 3 at one end of roller 1 is made with an integral sprocket-wheel 4, over which an endless sprocket-chain 5 passes and is driven by my improvements hereinafter explained.

Each cup 3 is provided on its outer end at its center with an integral journal or trunnion 6, mounted in a bearing 7 in a bracket 8, secured to the wall or other support, and this bearing 7 is made with an internal annular groove forming a runway for balls 9, inserted through a plugged opening 10 in the bearing, and provide a ball-bearing for the journal or trunnion 6 and insure the easy turning of roller or pole 1. This roller or pole 1 is supported at its center upon long rollers 11, having roller-bearings in curved arms 12, forming a part of bracket 13, secured to the wall or support, and similar bracket 14 is secured to the wall above bracket 13 and has curved arms 15 projecting over roller 1 and provides roller-bearings at their outer ends for a long roller 16. This roller 16 serves to contract the opening or space between the arms, preventing escape of the roller or pole 1 and directs the awning 2 onto the roller.

17 represents my improved operating-shaft, having bearings in a box or casing 18. This box or casing has a rear plate 19, to which the box is removably secured by screws, as shown, and the rear plate 19 is longer than the box and is made with elongated slots 20, having their walls notched for the reception of a toothed washer 20ª, through which bolts or screws 20ᵇ are passed to clamp it to the wall or other support in convenient reach of the operator, and these slots, washers, and bolts permit of longitudinal adjustment of the box to take up slack in the sprocket-chain 5, which passes around a drive sprocket-wheel 21, secured to or made integral with shaft 17. Shaft 17 is enlarged between said sprocket-wheel 21 and rear plate 19, as shown at 23, and made angular. A sliding bar 22 is mounted to slide in openings in opposite sides of box 18 and is of sufficient width to engage a flat face of angular enlargement 23 and hold shaft 17 and sprocket-wheel 21 against turning, thus preventing movement of the awning and holding it in the position to which it is adjusted. The slide-bar 22 has, however, a curved recess or depression 24 at one side of its center, which when moved below the enlargement 23 permits the shaft 17 to freely turn, and suitable stops 25 are made on the ends of bar 22 to limit the sliding movement thereof, so that when the bar is in one extreme position the recess 24 will be in a position to permit the shaft to turn, and when the slide is in the other extreme position the shaft will be locked against rotation. Shaft 17 projects out through box 18 and is made angular for the reception of a suitable wrench

or crank to turn the same and raise or lower the awning.

Instead of employing a sprocket-chain I might locate beveled gears *a* on the awning-pole 1 and drive-shaft 17 and support a vertical shaft *b* in suitable bearings and carry beveled gears *c*, meshing with gears *a*. This modified construction is shown in Fig. 9.

Instead of providing a bearing for the ends of the awning pole or roller 1, constructed as above explained, I might make such bearing as shown in Figs. 6 and 7. In this form of bearing I mount two trunnioned rollers 28 side by side in a suitable casing-bracket 27 and support the journal of roller 1 on both of these rollers 28, thus providing an antifriction-bearing to insure the easy operation of the awning.

The operation of my improvements is as follows: We will suppose the awning is down and it is desired to raise the same. The slide-bar 22 is moved to permit shaft 17 to turn, and a suitable wrench or crank-arm is inserted onto the protruding angular end of the shaft and turns this sprocket-wheel 21, and through the medium of chain 5 sprocket-wheel 4 and awning-pole 1 is rotated to wind the awning thereon. The awning-roller 1 turns on central rollers 11 to roll the awning onto the pole and draw the awning beneath roller 16, which latter serves to prevent the central portion of the awning-pole from escapement from rollers 11. When the awning is pulled up as far as desired, the operator moves slide-bar 22 to its other extreme position to lock the drive-shaft 17 and operating mechanism against movement and effectually hold the awning in its raised position. The lowering operation of the awning is accomplished in the same manner, save that the weight of the awning assists the operation.

Various other changes than those described might be made in the general form and arrangement of the parts described without departing from my invention, and hence I do not confine myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In an awning, the combination with a pole or roller to wind the awning thereon, and a sprocket-wheel on said pole or roller, of a shaft mounted to turn and having an angular portion, a slide-bar to engage the angular portion of the shaft and prevent turning thereof, a sprocket-wheel on said shaft, and a sprocket-chain connecting said sprocket-wheels.

2. In an awning, the combination with a pole or roller to wind the awning thereon, and a sprocket-wheel on said pole or roller, of a shaft supported in a box, mounted to turn therein, and projecting outside of the box and made angular for the reception of a wrench or crank, a bar mounted to slide through the box and having a recess in one edge to permit the turning of an angular portion of the shaft when opposite to the same, and said bar adapted to lock the shaft when slid to a position to hold the recess away from the enlargement, a sprocket-wheel on said shaft, and a sprocket-chain connecting said sprocket-wheels.

3. In an awning-operating mechanism, the combination with a plate having elongated slots therein, the walls of said slots notched, a toothed washer to lock in any of said notches, bolts or screws to enter the washers and secure the plate to a support, a box on said plate a drive-shaft thereon, and mechanism connecting said drive-shaft with the awning-pole for transmitting motion thereto.

4. In an awning-operating mechanism, the combination with a plate having elongated slots therein, the walls of said slots notched, a toothed washer to lock in any of said notches, bolts or screws to enter the washers and secure the plate to a support, a box on said plate a drive-shaft thereon, an angular portion on said shaft, and mechanism connecting said drive-shaft with the awning-pole for transmitting motion thereto, a slide-bar supported in openings in the box and adapted to engage the angular portion of the shaft, and a recess in said bar to permit the shaft to turn when moved adjacent to the angular portion of the shaft.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

MARTIN F. WIEDEMANN.

Witnesses:
MARY FAWCETT,
CHAS. C. CLARK.