No. 652,263.

Patented June 26, 1900.

C. H. HANSEN.

AWNING.

(Application filed Nov. 15, 1899.)

(No Model.)

3 Sheets—Sheet 1.

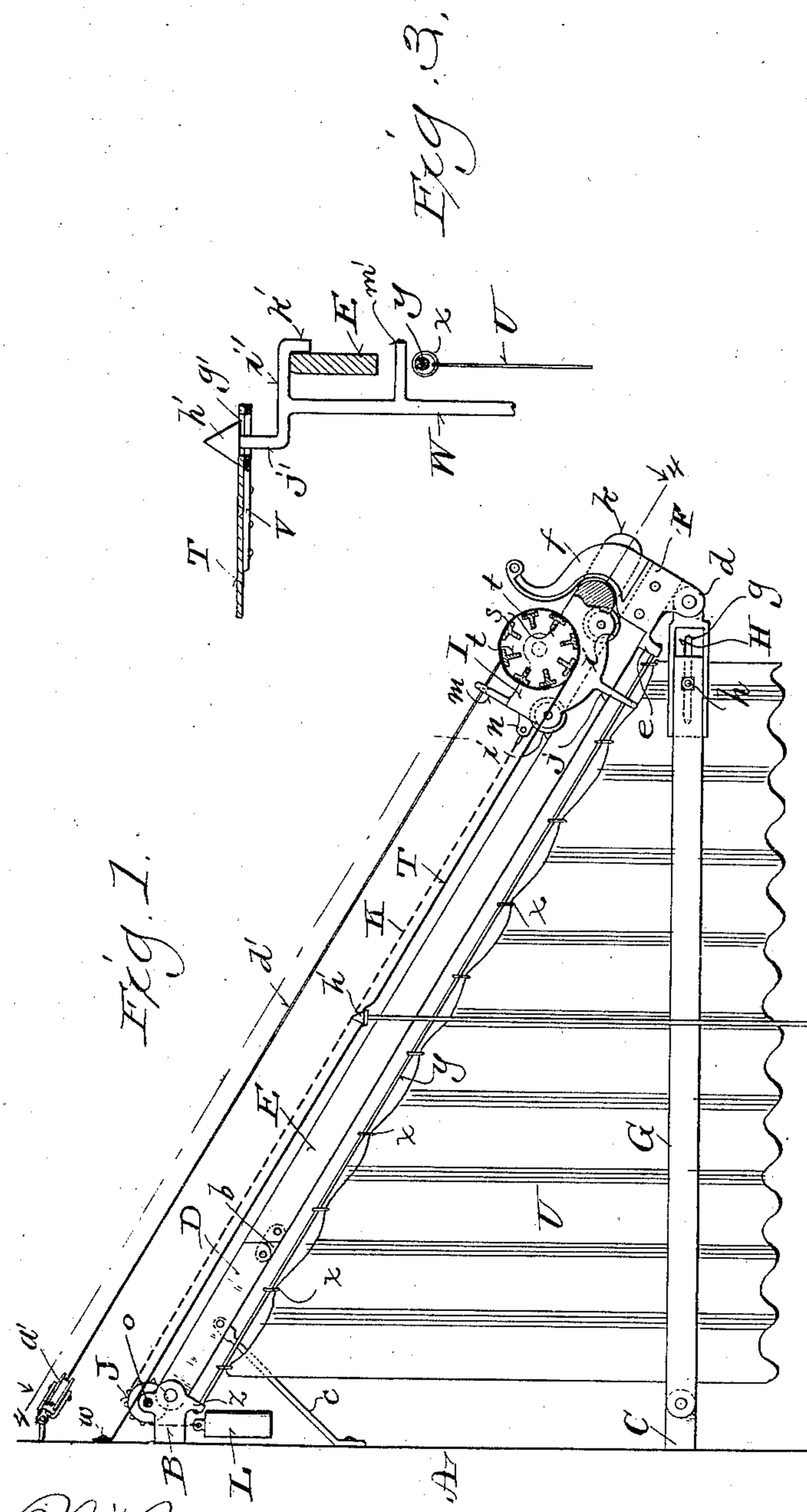

Fig. 1.

Fig. 3.

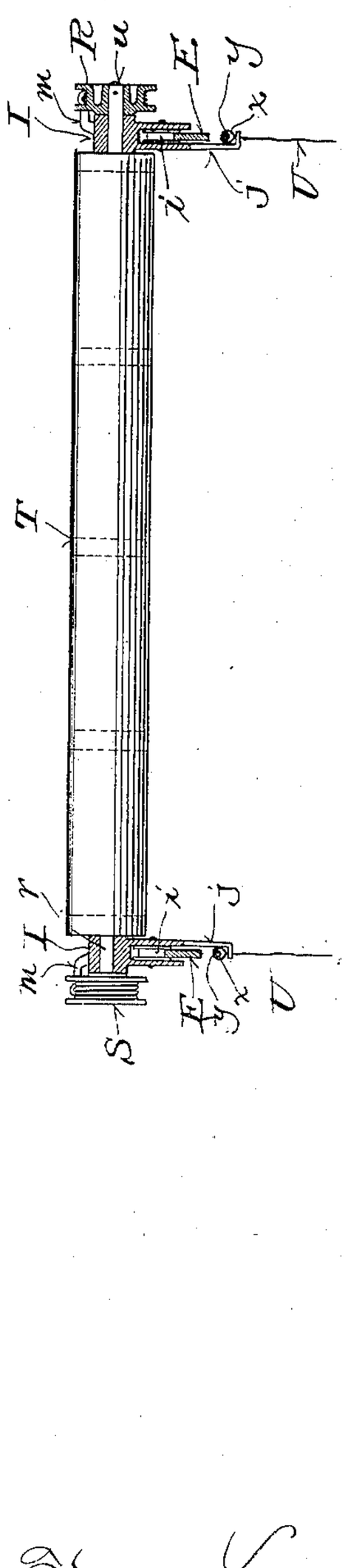

Fig. 2.

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Fig. 5.

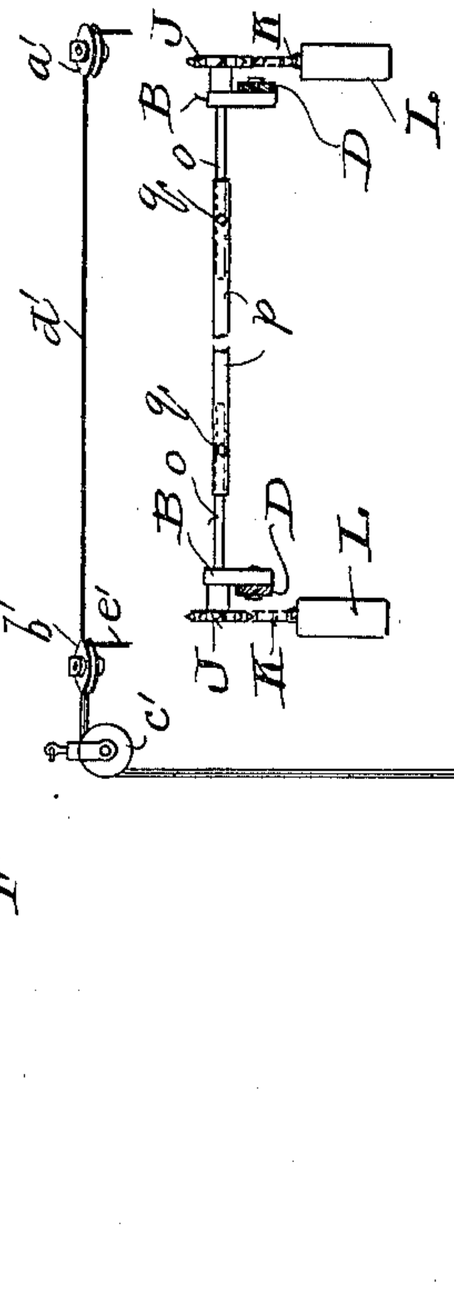
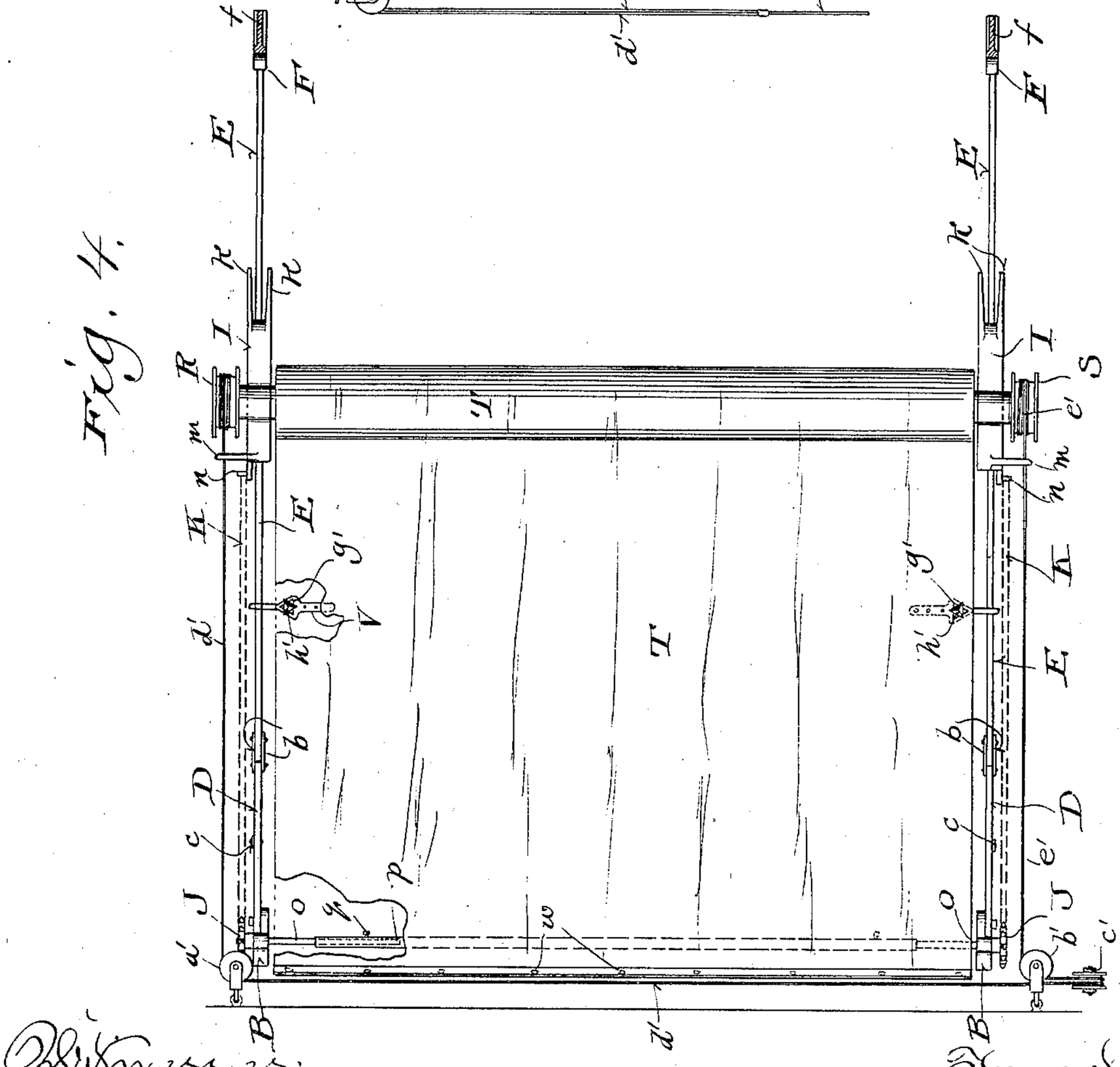


Fig. 4.



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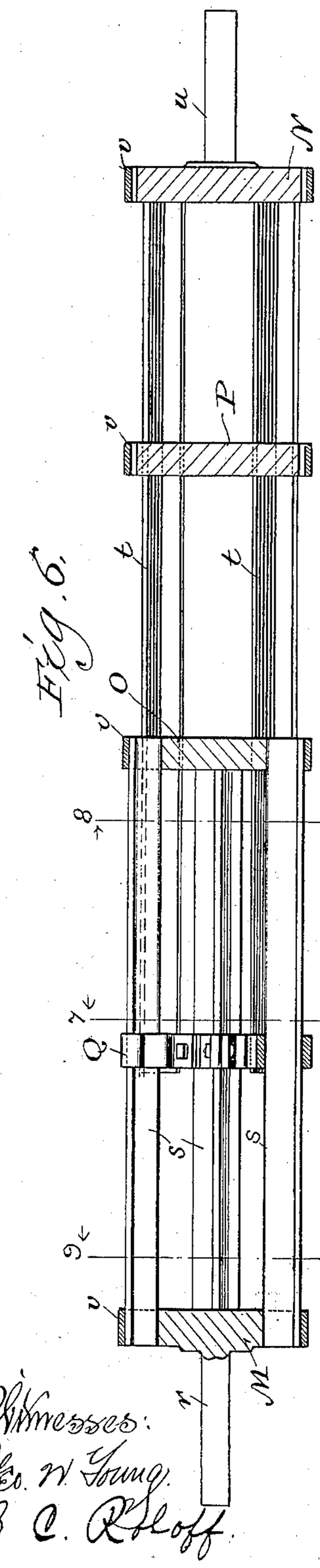

Fig. 6.

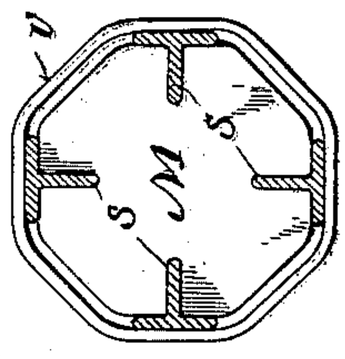

Fig. 9.

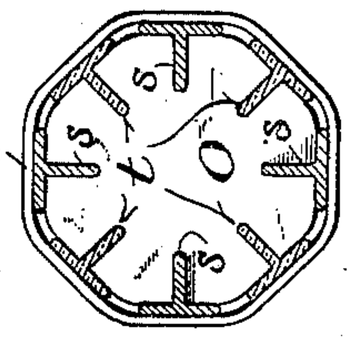

Fig. 8.

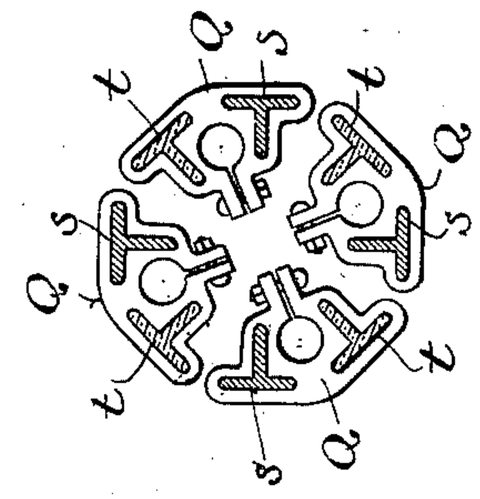

Fig. 7.

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UNITED STATES PATENT OFFICE.

CHARLES H. HANSEN, OF RACINE, WISCONSIN.

AWNING.

SPECIFICATION forming part of Letters Patent No. 652,263, dated June 26, 1900.

Application filed November 15, 1899. Serial No. 737,035. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. HANSEN, a citizen of the United States, and a resident of Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Awnings; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to movable awnings; and it consists in certain peculiarities of construction and combination of parts, as will be fully set forth hereinafter and subsequently claimed.

In the drawings, Figure 1 is a vertical central sectional view through an awning and frame embodying my present invention. Fig. 2 is a view of the awning-roller with said awning rolled thereon and showing the travelers, cord-spools, and adjacent parts at each end of said roller partly in section. Fig. 3 is a detail view of the upper end of one of the intermediate weighted rods with the adjacent parts of the awning and frame shown in section. Fig. 4 is a view of my device looking in the direction indicated by the arrows in Fig. 1 with the awning partially rolled up and broken away in part to illustrate details of construction below the same and with the traveler-bar brackets partly in section on the line 4 4 of Fig. 1. Fig. 5 represents detail views of portions of the frame and operating-cords. Fig. 6 is a longitudinal sectional view of the awning-roller. Figs. 7, 8, and 9 are transverse sectional views thereof, taken, respectively, on the planes indicated by the lines 7 7, 8 8, and 9 9 in Fig. 6.

Referring to the drawings, A, Fig. 1, represents the outer wall of the building or structure to which my said device is attached, and B C represent upper and lower brackets projecting from said wall, one each of said brackets being shown in said Fig. 1. Secured to each bracket B is one end of the upper part D of a traveler-bar D E, the meeting ends of said parts D E being beveled and secured together by hinge-plates *b b*, (one plate being removed in said Fig. 1, but both being shown in Fig. 4.) The said parts D of the traveler-bars are further supported by braces *c*, connected to the said wall A. The extreme outer ends of the parts E have secured thereto the brackets F, having curved upward-projecting portions *f* and lower projecting portions *d e*. To each bracket C is pivotally attached one end of the part G of what I term the "support-bar," which is vertically in line with the traveler-bar above. H represents the outer end of said support-bar, and same is made of channel-iron, so as to receive the adjacent end of the part G, this part H being pivotally connected to the projecting portion *d* of the bracket F and having a longitudinal slot *g*, through which and through a hole near the adjacent end of the part G there is passed a bolt *h*, so that after adjustment the two parts of the support-bar G H can be securely bolted together and held by a nut on said bolt *h*, as shown in Fig. 1.

I I represent the travelers, which move on the inclined traveler-bars D E D E and carry the awning-roller hereinafter described. Each traveler I is mounted on a pair of grooved wheels *i i*, which ride upon the part E of the traveler-bar, the lower part of said traveler being divided into two plates, so as to receive said wheels between them, said plates straddling the part E of the traveler-bar and one of said plates terminating in a central downward-projecting arm *j*, having an outwardly-turned lower end. The lower or outer end of each traveler I is formed with fork branches *k k*, which are adapted to straddle the part *f* of the bracket F at the downward limit of travel of said traveler, and, further, the end of the traveler between said fork branches is made in rounded convex shape to snugly engage against the corresponding rounded concave surface of the upward-projecting portion *f* of the bracket F, as best shown in Fig. 1. The upper or inner end of each traveler I is provided with two lugs *m* and *n* for the hereinafter-described cord and chain connections.

J J represent sprocket-wheels secured to the outer ends of shafts *o o*, which are mounted in bearings in the brackets B B, the inner ends of said shafts telescopically engaging with a tube *p*, forming therewith a longitudinally-adjustable shaft, set-screws *q q* serving to secure the parts *o o p* rigidly together after the desired adjustment, so as to make said parts practically one shaft.

K K represent sprocket-chains extending from the lugs *n n* on the travelers I I to and

over the described sprocket-wheels J J and carrying weights L L at their upper ends to nearly counterbalance the weight of the travelers and awning-roller.

I will next describe the preferred construction of the awning-roller, as shown in detail in Figs. 6 to 9, inclusive. This roller is preferably made in two sections, which telescopically engage with each other, so as to permit longitudinal adjustment according to the width of the particular awning to be employed. Each section of said roller is composed of a number (preferably four) of bars of T-iron held in place by suitable disks and bands. In the drawings, M represents the outer end disk of one section, and N the outer end disk of the other section, with journals or arbors (marked *r* and *u*, respectively) projecting therefrom. The bars of the first section are marked *s s s s*, and those of the second section are marked *t t t t*. O represents the inner end disk of the first section, and P a disk intermediate of the ends of the second section. The said disks are slotted or channeled to receive the central flanges of the T-bars, and when same are in place straps or bands are passed around the disks and bars, forming (in the present illustration) octagonal bands *v*. The disk O is channeled to receive all the bars of both sections, eight bars in all, while the other disks receive only four bars. Q Q Q Q represent clips, each having a pair of T-slots to receive one bar of each section. These clips are located on the inner ends of the bars of the second section and are movable upon the bars of the first section, and when the desired telescopic adjustment has been made according the desired length of the roller the inner split ends of the clips are drawn together by bolts, as best shown in Fig. 7, and thereby the bars of the two sections of the roller are held firmly together in the adjusted position. The journals or arbors of the roller are mounted in suitable bearings in the travelers I I, through which they project, spools R S being made fast to said projecting ends of the said journals or arbors.

T represents the awning, consisting of a strip of suitable fabric of the proper width, the upper end of which is secured to the wall A of the building, as shown at *w w*, and the lower end of which is made fast to the bars of the roller. The wings or side pieces of the awning are made separate therefrom, one wing being shown at U in Fig. 1, and to the upper oblique edge of the fabric of the wing are secured rings *x x x*, through which is passed a heavy cord *y*, one end of which is secured to a lug *z* on the bracket B and the other end to the lug *e* on the bracket F. The outwardly-turned lower end of the projecting arm *j* of each traveler projects under the adjacent cord *y*, as best shown in Fig. 2.

Secured to the wall A, above the plane of the top of the awning T, are three pulleys *a' b' c'*. A cord *d'* is secured at one end to the spool R and passes through an eye in the guide-lug *m* on the adjacent traveler I, thence above and parallel with the traveler-bar E D on that side and around pulley *a'*, and thence along the face of the wall A to and past pulley *b'* and around pulley *c'* and down. A similar cord *e'* is made fast at one end to spool S and thence passes through an eye in the guide-lug *m* on the adjacent traveler and along parallel with and above the traveler-bar E D on this side and around pulley *b'* and down over pulley *c'*, the ends of the two cords *d' e'* being united and connected to a handle *f'*, hanging down just within reach of an operator on the ground or sidewalk. When the awning T is down its full length, as shown in Fig. 1, the cords *d' e'* are wound to their fullest extent upon the spools R S, and the lower end of the awning is wound only one turn around the roller. It will thus be seen that when the operator draws down on the handle *f'* this draws the travelers I I upward on the traveler-bars D E D E, the cords *d' e'* unwinding from their spools and the awning T winding up on its roller as the travelers are drawn upward, while at the same time the described projecting ends of the arms *j j* on the travelers will be drawn into contact with the adjacent rings *x x* on the cords *y y*, and thus force the wings or side pieces U U of the awning up with them, so that said wings are finally bunched together against the wall A when the awning is finally wound up, as described. The weight of the travelers and roller is just a little more than that of the weights L L, and when it is desired to let down the awning this will be accomplished by gravity, as the wheels of the travelers move down the traveler-bars, the arms *j j* carrying down the front ends of the described wings at the same time.

Some city ordinances prohibit the permanent projection of awning-frames, and therefore the traveler and support bars are constructed with hinges and joints, as shown, so that when the awning is rolled up and the cord ends fastened in any suitable way the parts G of the support-bars can be disconnected from the parts H thereof and the parts of the awning-frame properly folded away from the sidewalk and toward or against the wall A.

In order to guard against the flapping of the awning T and to keep it from being raised by air-currents, I make a triangular slot *g'* in each side, protecting same by a plate V on the under side, which plates have like slots therein, and through these slots I pass the triangular heads *h'* of weighted rods W, turning said rods then partly around, so that the base of the triangular head of each is above and across the apex of the triangular slot, as shown in Fig. 4. The upper end of the said rod W is provided with a horizontal cross-bar *i'*, at one end of which is a vertical upward-extending projection *j''*, which forms the neck of the described head *h'*, while

at the other end of said cross-bar there is a vertical downward projection k', adapted when the rod W has been inserted through the slot g' and turned to the described locked position to rest over the upper edge of the traveler-bar E, while below this there is another lateral projection m' on said bar W, adapted to extend below the lower edge of said traveler-bar, all as best shown in Fig. 3, whereby the possible lift of the awning T under the force of the wind is restricted.

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

1. The combination with a pair of suitably-supported traveler-bars, of travelers adapted to move back and forth upon said bars, a transverse roller supported by said travelers, and an awning made stationary at its upper end and secured to said roller at its lower end, and adapted to roll up on said roller as the latter is drawn toward the stationary end of the awning, or to unwind from said roller as the latter is carried outward by the movement of said travelers.

2. The combination with a supporting structure and a pair of suitably-supported inclined traveler-bars extending therefrom, of travelers adapted to move back and forth upon said bars, a transverse roller having journals or arbors mounted in said travelers, spools fast on the projecting ends of said journals or arbors, sprocket-wheels on the supports of said traveler-bars, sprocket-chains attached at their forward ends to said travelers and passing over said sprocket-wheels, counterbalance-weights at the rear ends of said chains; a series of pulleys attached to the supporting structure; cords attached to said spools and in engagement with said pulleys, and an awning secured at one end to said supporting structure and at the other end to said transverse roller.

3. The combination with a supporting structure and a pair of suitably-supported inclined traveler-bars extending therefrom, of a pair of cords supported beneath and parallel with said traveler-bars; a pair of awning-wings or side pieces suspended from said cords by rings secured to the upper edges of said wings; a pair of travelers adapted to move back and forth upon said bars and having downward-extending arms terminating in outwardly-projecting ends extending beneath said cords; a transverse roller journaled in said travelers; an awning secured at one end to said supporting structure and at the other end to said transverse roller, and cords secured to said roller for drawing the said travelers upward and thereby simultaneously rolling up the awning on said roller and drawing up the said awning-wings on the suspension-cords.

4. The combination with a supporting structure and a pair of inclined traveler-bars connected thereto, of a pair of support-bars, also connected to said structure and adjustably connected to said traveler-bars, a pair of travelers movable upon said traveler-bars; a transverse roller journaled in said travelers; an awning secured at its upper end to said structure and at its lower end to said transverse roller, and means for drawing said travelers upward and thereby winding up said awning on said roller.

5. The combination with a supporting structure of a pair of inclined traveler-bars pivotally secured thereto; a pair of brackets secured to the lower ends of said bars and having curved upward-projecting portions; a pair of support-bars pivotally connected to said structure and adjustably connected to said brackets; a pair of travelers movable upon said traveler-bars, and having forked branches at their lower ends for engagement with the upper projecting portions of said brackets; a transverse roller journaled in said travelers; an awning secured at its upper end to said structure and at its lower end to said transverse roller, and operating-cords for drawing said travelers upward and thereby winding up said awning on said roller.

6. The combination with a supporting structure of a pair of suitably-supported traveler-bars extending therefrom; a pair of travelers movable upon said bars; a transverse roller journaled in said travelers; an awning secured at its upper end to said structure and at its lower end to said transverse roller, said awning being formed with angular slots adjacent to each edge thereof; weighted rods having angular heads adapted to pass through said slots, and lateral projections adapted to extend above and below said traveler-bars, and operating-cords for drawing said travelers upward and thereby winding up said awning on said roller.

7. The combination with a supporting structure of upper and lower brackets extending therefrom, a pair of inclined two-part traveler-bars pivotally attached to said upper brackets; hinge-plates uniting the two parts of each traveler-bar; brackets rigidly secured to the lower ends of said traveler-bars; a pair of two-part support-bars pivotally attached to the lower brackets on said supporting structure, the two parts of each support-bar being adjustably united by slot-and-bolt connection, and the outer part of each support-bar being pivotally connected to the brackets on the lower ends of the traveler-bars; a pair of travelers movable upon said traveler-bars and having forked branches at their lower ends for engagement with the brackets on the lower ends of the traveler-bars; a longitudinally-adjustable transverse roller journaled in said travelers; a longitudinally-adjustable shaft journaled in the upper brackets on the supporting structure; sprocket-wheels on said shaft; sprocket-chains attached to said travelers, and passing over said sprocket-wheels; counterbalance-weights on the free ends of said chains; an awning secured at one end to said supporting structure and at the other end to said roller, and operating-cords for

drawing said travelers upward, and thereby winding up said awning on said roller.

8. The combination with a supporting structure of a pair of suitably-supported traveler-bars extending therefrom; a pair of travelers movable on said bars, and a longitudinally-adjustable awning-roller comprising two telescoping sections, having outer end disks provided with arbors journaled in said travelers, the said sections being formed of series of T-shaped bars, internal supporting-disks and external bands, and the bars of one section being connected to the bars of the other section by a series of clips, each clip having a pair of T-slots to receive one bar of each section.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

CHAS. H. HANSEN.

Witnesses:
H. G. UNDERWOOD,
B. C. ROLOFF.