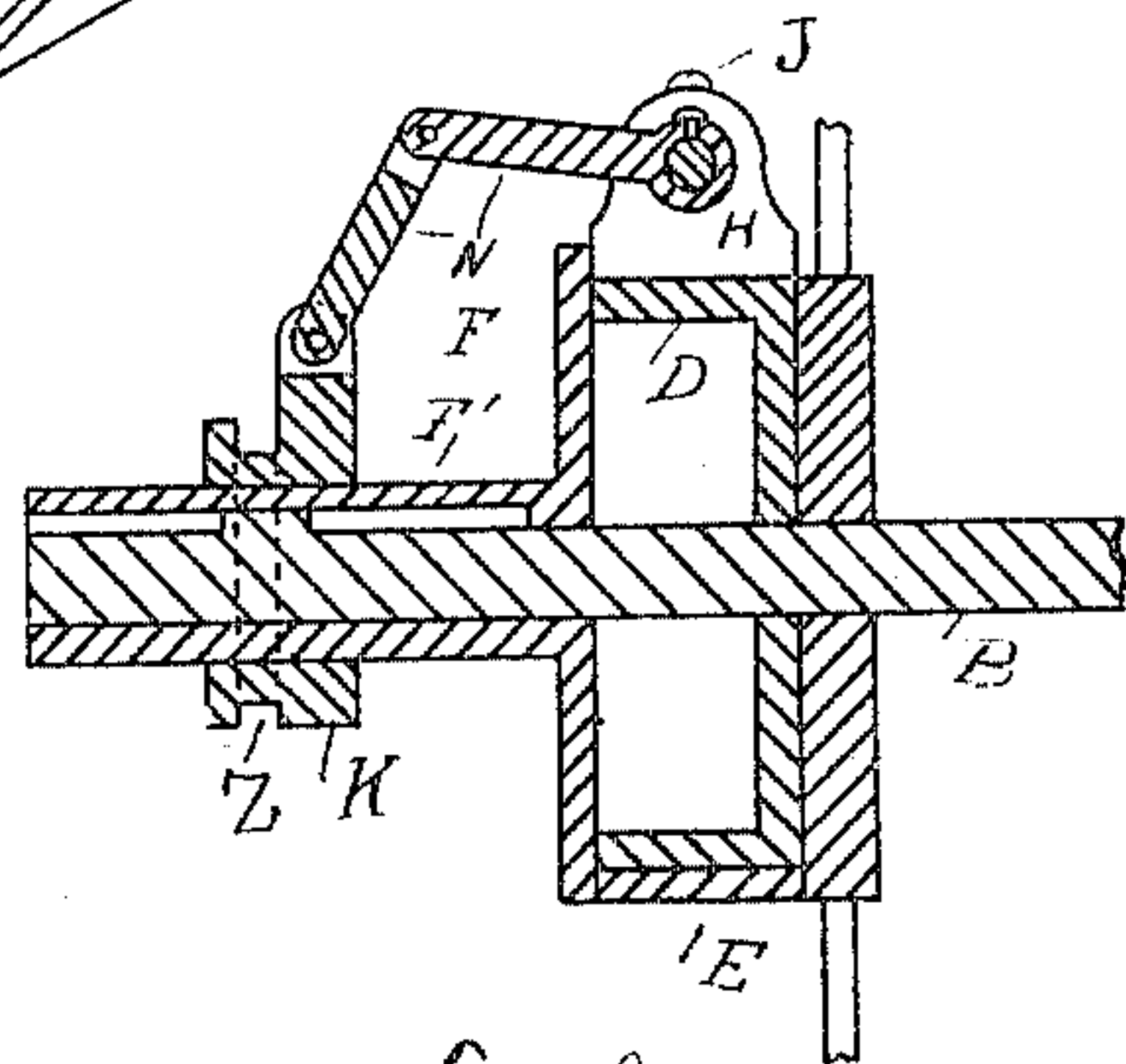
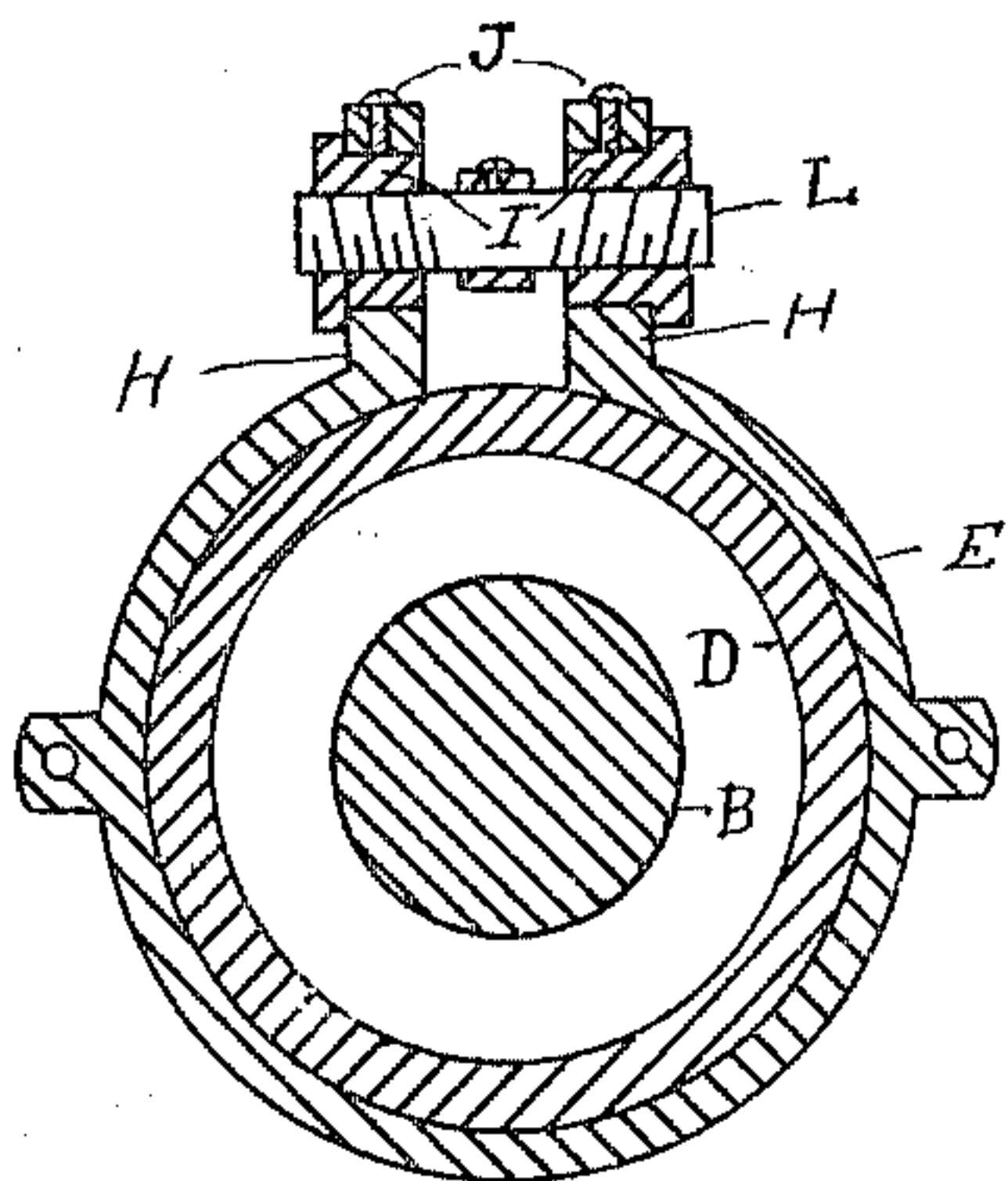
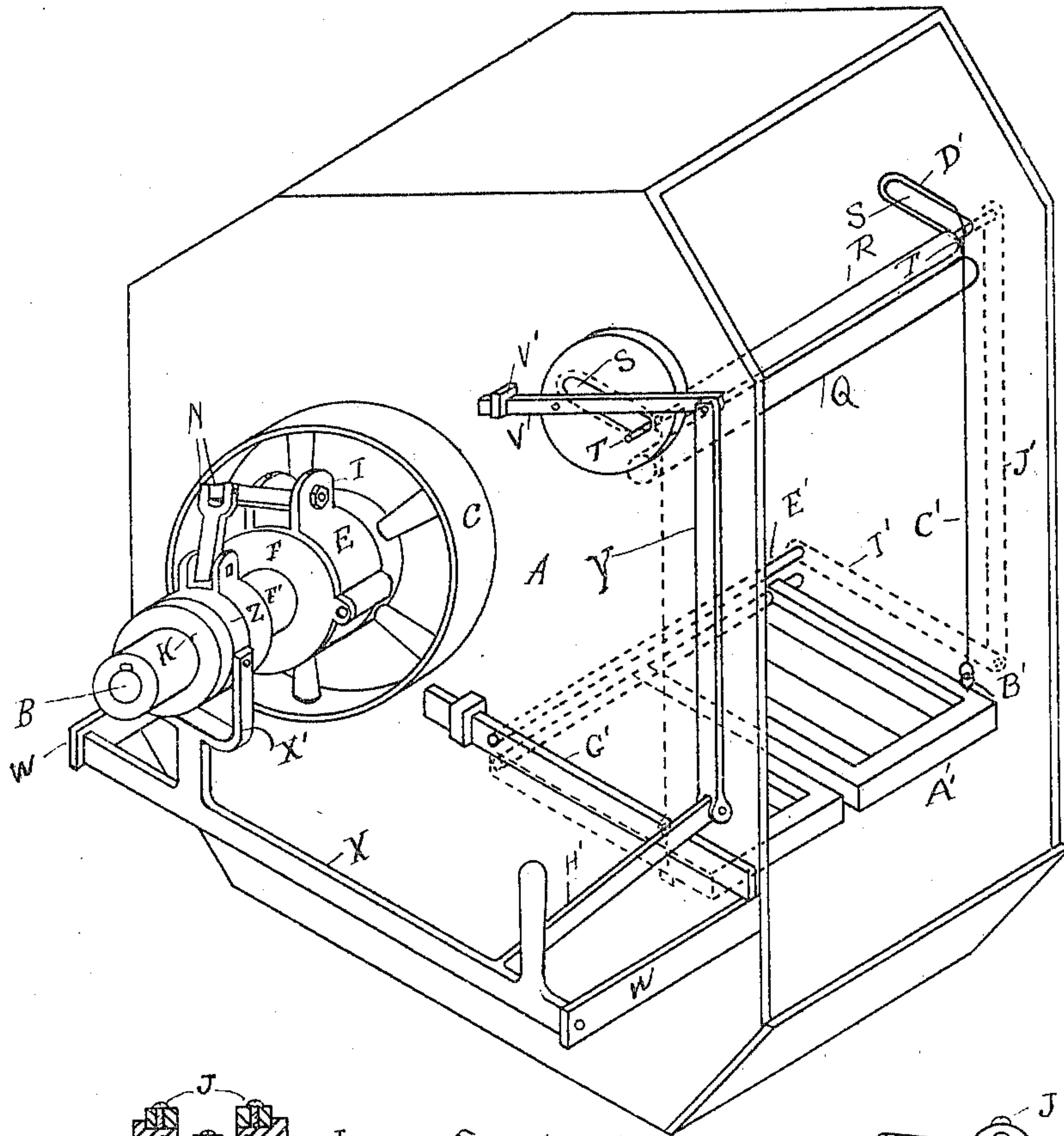


No. 811,075.

PATENTED JAN. 30, 1906.

A. D. MANSELL.
STOP MOTION FOR PULLING MACHINES.

APPLICATION FILED MAY 29, 1905.



WITNESSES:
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UNITED STATES PATENT OFFICE.

ARTHUR D. MANSELL, OF NEWPORT, MAINE, ASSIGNOR TO THE LEAVITT
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STOP-MOTION FOR FULLING-MACHINES.

No. 811,075.

Specification of Letters Patent.

Patented Jan. 30, 1906.

Application filed May 29, 1905. Serial No. 262,737.

To all whom it may concern:

Be it known that I, ARTHUR D. MANSELL, a citizen of the United States, residing at Newport, in the county of Penobscot and State of Maine, have invented new and useful Improvements in Stop-Motions for Fulling-Machines, of which the following is a specification.

My invention relates to improvements in stop-motions for fulling-machines, and more particularly to mechanism for automatically stopping the machine before a knot or other obstruction in the cloth passes to the feed-rolls.

In fulling-machines as at present constructed the cloth passes through the meshes of a tilting rack and thence between two rolls, one movable, interposed between the guide-rack and the feed-rolls. The movement of the movable roll caused by a knot or other obstruction in the cloth coming between it and the stationary roll sets in motion mechanism for stopping the machine.

My invention consists in means for operating the movable roll whenever the tilting rack is moved by an obstruction passing through it, as well as by the obstruction passing between the fixed and movable rolls.

In the drawings herewith accompanying and making a part of this application, Figure 1 is a perspective view of a fulling-machine with my stop-motion attached thereto, the end being shown open to expose a part of the interior structure of the machine. Fig. 2 is a longitudinal sectional view through the clutch and clutch-operating levers, and Fig. 3 is a transverse sectional view taken through the clutch.

Same letters of reference refer to like parts.

In said drawings, A represents the sides of the housing of a fulling-machine, and A' a tilting guide-rack pivotally mounted therein. Mounted in said housing is a driving-shaft B, having loosely mounted thereon a driving-pulley C, provided with a projecting hub D. Surrounding said hub and in frictional engagement therewith is a tightening-band E. Said tightening-band is secured to the enlarged head F of a sleeve F' on the driving-shaft, as seen in Fig. 2. The tightening-band has upwardly-extending ears H, in each of which is set an interior-threaded nut I, the thread on one being cut reversely to that on the other, as shown in Fig. 3. The nuts are held against rotation by means of set-screws J, as seen in

Fig. 3. Adapted to slide on said sleeve is a collar K, and connecting said collar and a threaded bolt L, passing through said nuts I, is a toggle-lever N, one member of said toggle-lever being rigidly secured to said bolt and the other member being pivotally secured to said sleeve. Movement of said collar outwardly or inwardly on said sleeve loosens or tightens the tightening-band, and thus causes the stopping or running of the machine, as the case may be. Any suitable clutch movement may be substituted, as my invention does not pertain to the clutch mechanism nor to the means for operating it.

Passing now to the mechanism for operating the clutch, I mount between the sides of the frame in front of the drawing-rolls (not shown) two bars, the lower, Q, being stationary, but rotatable, if preferred, the other, R, resting loosely upon the former and having its end loosely mounted in slots S in the sides of the housing. The ends of the bar R are preferably reduced and project through the sides of the machine, as seen at T in Fig. 1. On the outside of that side of the frame on which the driving-pulley is mounted is a pivoted lever V, extending across the path of the projecting end of the movable bar. The lever V may have a sliding counterbalance-weight V'. Pivotally mounted on brackets W, secured to the frame, is an angle-lever X, one arm being pivotally connected with the lever V by means of a link Y and the other arm being provided with a bifurcated arm X' at right angles thereto and having its ends adapted to take into a groove Z in the collar K on the driving-shaft.

As usually constructed the machine has double guide-racks, and so it is necessary to provide means for operating the clutch from the opposite side of the machine. For this purpose a transverse bar E' is mounted in the housing, and on the end which projects through the side of the machine toward the pulley is pivotally mounted a lever-arm G', which extends under the arm H' on the lever which operates the clutch. On the opposite side of the housing is a corresponding lever-arm I', rigidly secured to said transverse bar E', and connecting the end of said lever-arm I' and the end of the movable bar is a pivoted link J', arm I' and link J' being shown in dotted lines.

Attached to the guides in any convenient

manner, as by eyebolt B', is a rigid rod C', having a loop D' at its upper extremity, through which the reduced end of the movable bar passes. When the guide-rack is in its normal position, the end of the movable bar should rest loosely upon the bottom of the loop. For convenience the loop is made substantially coincident with the slot S in the housing. When double racks are used, each side of the machine and each guide-rack is provided with the rod, with loop at the end, for operating the bar.

The operation of my improved stop-motion is as follows: Whenever a knot or kink in the cloth is too large to pass through the mesh in the guide-rack, it lifts the rack, and with it rod C', which in turn lifts the end of the movable bar, causing it to rise and lift the end of lever V. This in turn, through the connecting mechanism already described, throws the sliding collar outwardly on the shaft and loosens the tightening-band, and thereby the friction-sleeve, thus stopping the machine. Any obstruction in the cloth which may pass through the rack or which may be formed in the cloth after passing through the rack will on reaching the movable roll raise the roll, as before,

without raising the rack, thus operating to stop the machine, as before.

Having thus described my invention and its use, I claim—

1. In a stop-motion for fulling-machines, a pivotally-mounted guide-rack, two bars positioned between said guide-rack and the drawing-rolls, one movable away from the other, and means operable by said rack to stop the machine.

2. In a stop-motion for fulling-machines, a pivotally-mounted guide-rack, two bars positioned in front of the drawing-rolls, one movable away from the other, a rod having one end attached to the guide-rack and the other end provided with a loop through which the end of said movable bar passes and in the bottom of which it rests and means operable by said rack, rod and movable bar to stop the machine.

In testimony whereof I have signed this specification, in presence of two subscribing witnesses, this 12th day of April, 1905.

ARTHUR D. MANSELL.

In presence of—

A. R. BURRILL,
S. W. CHASE.