

(No Model.)

A. URBACH.

TENSION DEVICE FOR MACHINES FOR MAKING CHENILLE OR
ORNAMENTAL CORD.

No. 461,059.

Patented Oct. 13, 1891

Fig. 3.

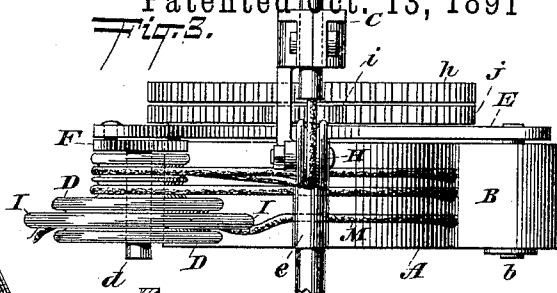
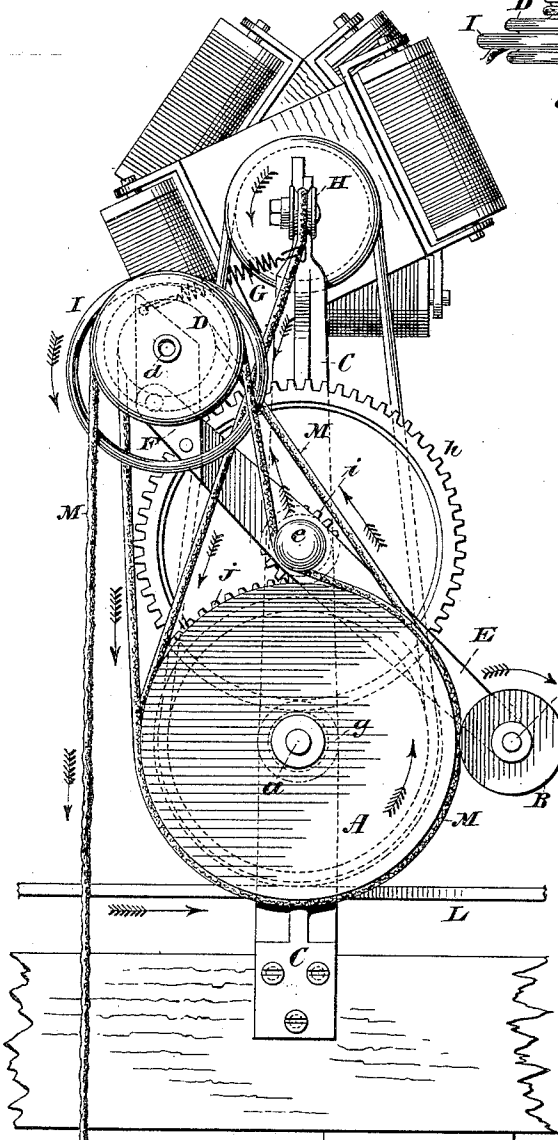


Fig. 1.

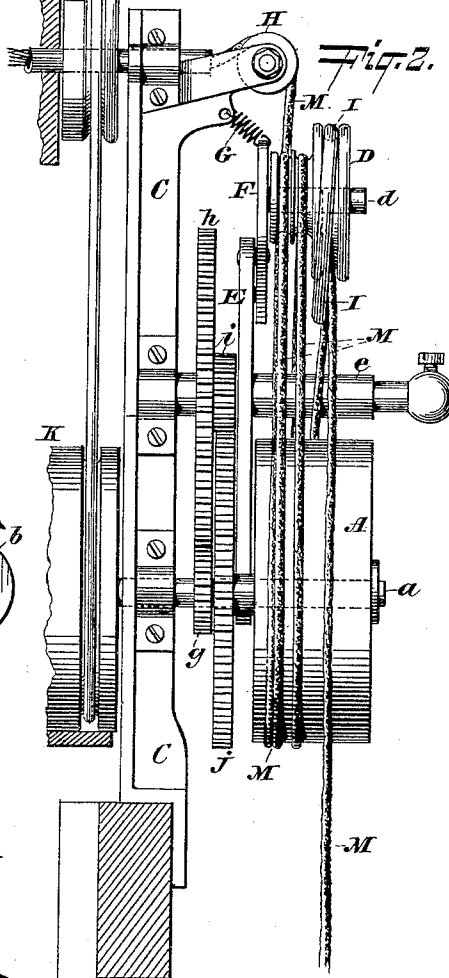


WITNESSES:

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Gustave Dietrich.

R. C. Mitchell.

Fig. 2.



INVENTOR

Alvill Urbahn.

BY *Briesen & Knauth*

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UNITED STATES PATENT OFFICE.

ALWILL URBahn, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE AMERICAN
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TENSION DEVICE FOR MACHINES FOR MAKING CHENILLE OR ORNAMENTAL CORD.

SPECIFICATION forming part of Letters Patent No. 461,059, dated October 13, 1891.

Application filed April 8, 1891. Serial No. 388,162. (No model.)

To all whom it may concern:

Be it known that I, ALWILL URBahn, a resident of the city of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Tension Devices for Machines for Making Chenille or Ornamental Cord, of which the following is a full, clear, and exact description.

My invention relates to the improvement in machines of the class described in my patent, No. 266,928, of October 31, 1882, and in my patent, No. 293,605, of February 12, 1884.

The object of this invention is to perfect the mechanism by which the ornamental cord is discharged from the machine and by which a proper tension may be kept on the finished cord during the process of making the same.

The invention consists in the new combination of parts hereinafter described and claimed.

Reference is had to the accompanying drawings forming a part of this specification, wherein—

Figure 1 is a face view of my improved machine. Fig. 2 is a part side elevation of the same. Fig. 3 is a plan view of Fig. 2.

A is a drum turning on the shaft *a*, which has its bearing in the supporting frame-work C.

B is another drum bearing against the periphery of the drum A and hung on the arbor *b*, which is supported in a lever E. This lever is pivoted to the frame-work C at *e*. At the upper end of the lever E is riveted or otherwise formed an arm F. A grooved pulley D turns on an arbor *d* that projects from the arm F. One of the grooves, of which there may be several, in this pulley D is preferably of larger circumference than the others. A spring G, fastened at one end to the frame C and at the other end to the arm F, causes the drum B to bear against the drum A to a degree determined by the strength of the spring G.

H is a pulley hung in the upper part of the frame C.

In my improved machine the cord M is brought from the pulley H down around the lower part of the drum A, up between the drums A and B, up to and around the upper part of one of the smaller grooves in the pul-

ley D, down around the lower part of the drum A again, between the drums A and B, up to and around one of the smaller grooves in the drum D, again down to the drum A, up between the drums A and B, then preferably under an extension of the pivot *e*, up over the larger groove in the pulley D, and down into the proper receiver. It is very desirable that there may be a suitable tension on the cord as it passes over the largest groove in the pulley D from the drum A. Therefore a ring I of a circumference greater than the largest circumference of the pulley D is supported by the pulley D in the groove of the largest circumference, so that it will cause the cord, as it last passes over the pulley D, to be to a certain degree fractionally held between said ring I and the largest groove in said pulley D. A toothed wheel J is connected with the drum A, which turns loosely on the shaft *a*. Fixed to the shaft *a* is a toothed pinion *g*, which meshes with the teeth of a larger gear-wheel *h*. This gear-wheel *h* is hung on the spindle *e* and carries a pinion *i*, which meshes into the wheel J. The shaft *a* is revolved by the drum K, which is turned by a moving belt L, and the system of cog-wheels previously explained is set in motion thereby. Because of the arrangement of these wheels a slow rotation is transmitted to the drum A, causing the cord M, as it is fed from the pulley H, to take the course previously described and finally pass from the grooved pulley D to the receiver. The tension of the cord M between the drum A and the smaller grooves in the pulley D causes the pulley D to turn.

By providing a machine of the kind herein described with this improvement I am enabled to give to the cord M the proper even tension, and also prevent any chance of the cord M becoming jammed between the drums, thereby becoming spoiled for a distance. By experiment I have demonstrated that with this improvement the daily capacity of the machine is greater than it would be without said improvement. The necessity of care on the part of an attendant is largely decreased and the evenness and the quality of the cord M is greatly improved.

Having thus described my invention, what I claim is—

1. The combination of the grooved pulley D and its fixed bearings with the lever E, carrying the drum B, and with the drum A, hung in fixed bearings, and means for revolving the same, all for allowing the cord to be placed in several layers around the pulley D and drum A, substantially as shown and described.

2. The combination of the pulley D, having two or more grooves, one of which grooves has a larger circumference than the other, with the cylindrical drum A and means for rotating said drum, and with means, substantially as described, for feeding a continuous cord first to the circumference of the drum A, then to one of the grooves of the pulley D, thence back to the drum A, and finally to another groove of a larger diameter than the first of the pulley D, and thence to a suitable receiver to produce differential tension in the said cord, substantially as herein shown and described.

3. The grooved pulley D, carrying the loose

ring I, in combination with the drum A and means, substantially as described, for rotating the same, all for the purposes herein shown and described.

4. The grooved pulley D, carrying the loose ring I, in combination with the drum A and the spindle *e*, with means for revolving the drum A, said spindle *e* serving as a tension device for cord passing from the pulley D to the drum A, all substantially as and for the purpose specified.

5. The combination of the frame C, drum A, hung therein, and means for revolving the same, with the lever E, pivoted to the said frame, grooved drum D, hung in said frame, drum B on lever E, and pulley H, hung on frame C, all arranged substantially as herein shown and described.

ALWILL URBahn.

Witnesses:

GUSTAV SCHNEPPÉ,
HARRY M. TURK.