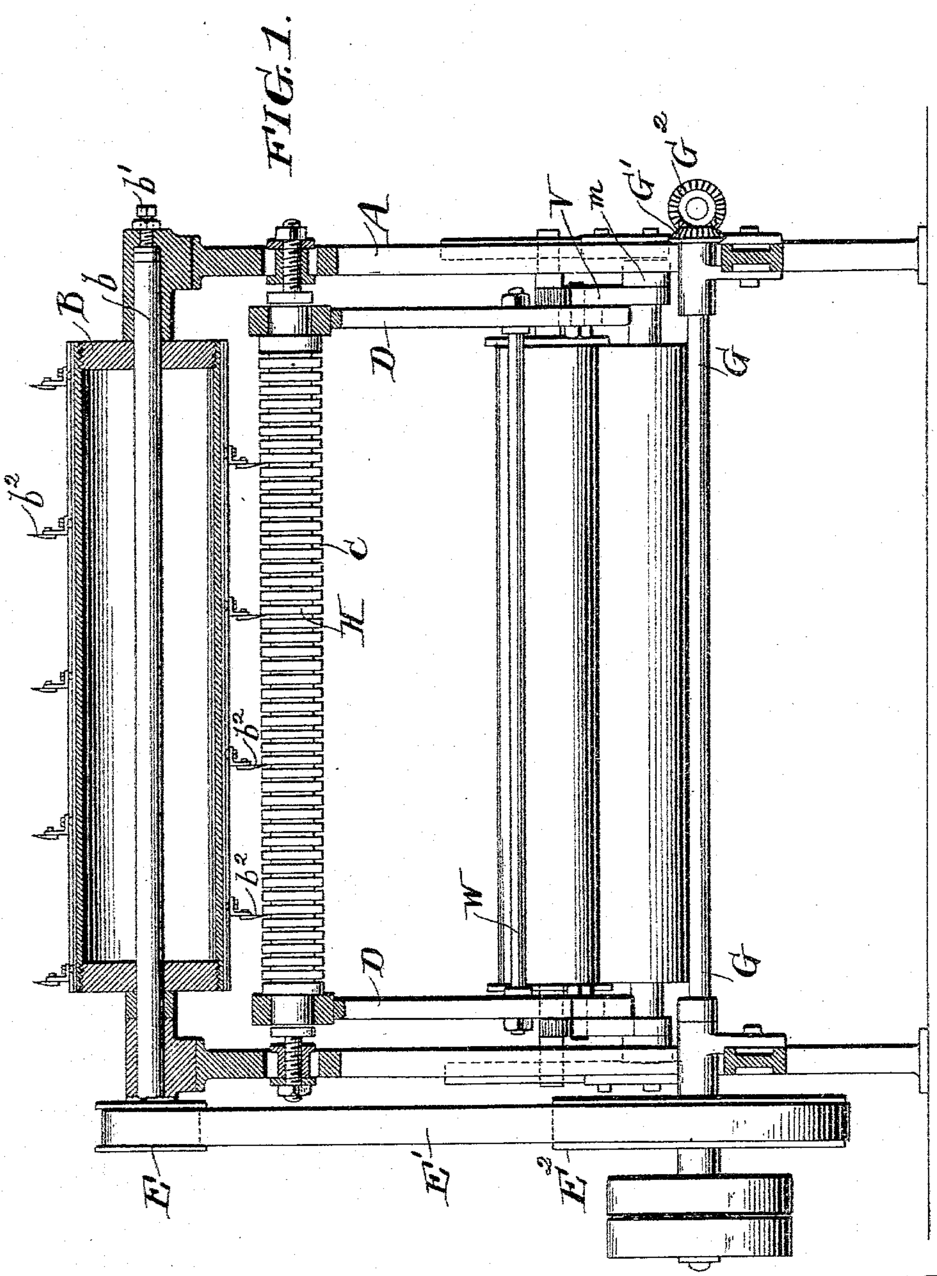
(No Model.) 2 Sheets—Sheet 1.

O. LEVER & W. S. GRUNDY.

CHENILLE CUTTING MACHINE.

No. 491,218. Patented Feb. 7, 1893.



WITNESSES:

INVENTORS
Oswald Lever and Wm S Grundy
by their atty

(No Model.) 2 Sheets—Sheet 2.

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FIG. 2.

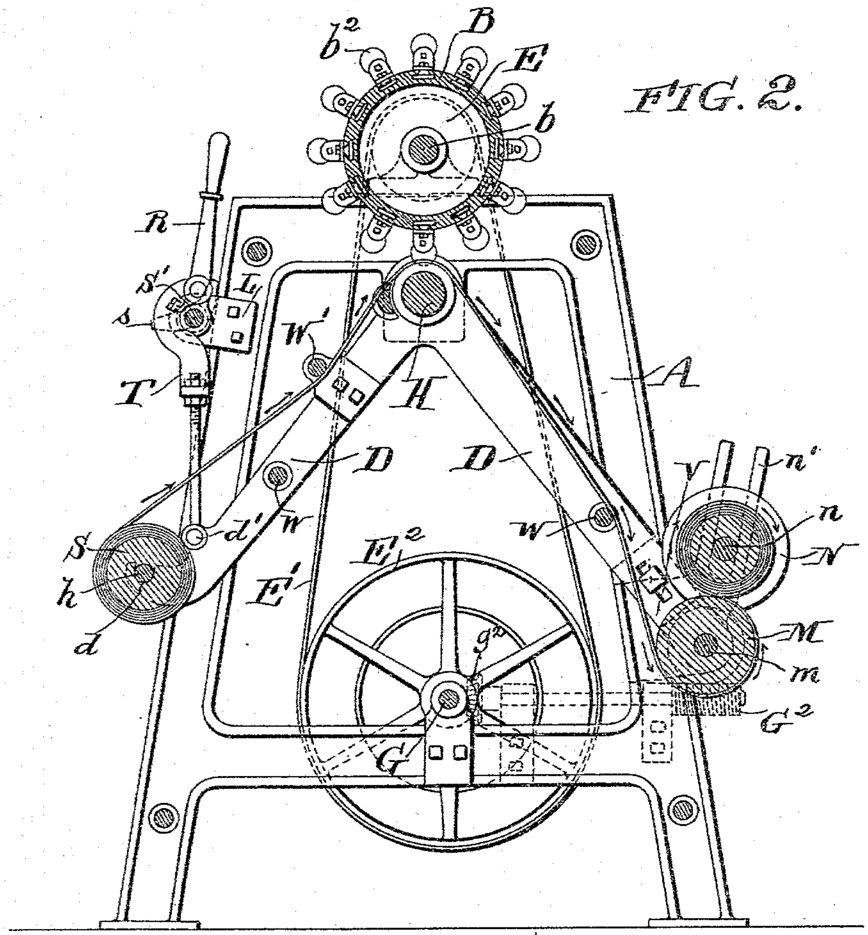
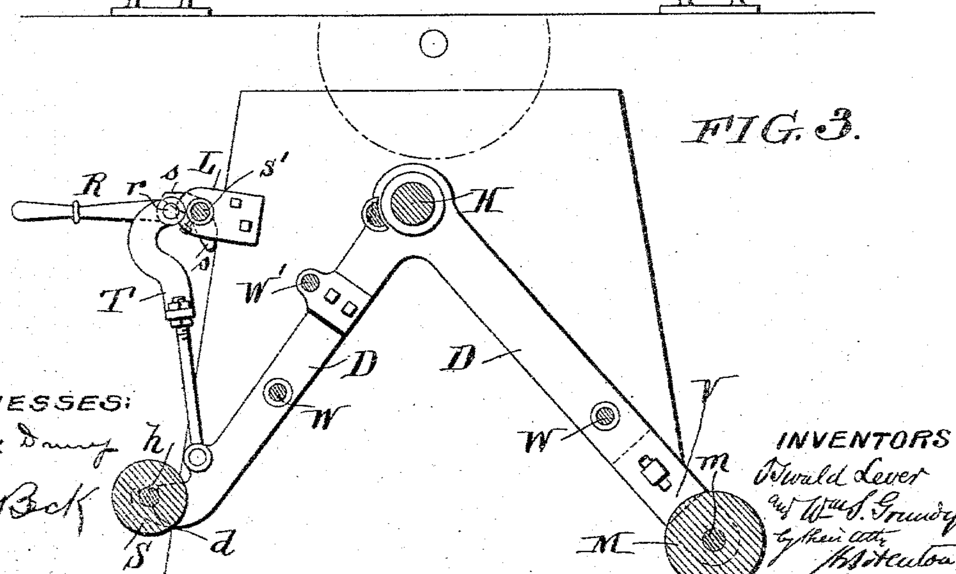


FIG. 3.



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UNITED STATES PATENT OFFICE.

OSWALD LEVER AND WILLIAM S. GRUNDY, OF PHILADELPHIA, PENNSYLVANIA.

CHENILLE-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 491,218, dated February 7, 1893.

Application filed September 21, 1892. Serial No. 446,412. (No model.)

To all whom it may concern:

Be it known that we, OSWALD LEVER and WILLIAM S. GRUNDY, citizens of the United States, residing in the city of Philadelphia, State of Pennsylvania, have jointly invented certain new and useful Improvements in Chenille-Cutting Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

Our invention relates to chenille-cutting machines, and has for its object the provision of mechanism operating to raise and lower the grooved guide roll over which the chenille threads pass to be operated upon by the rotating cutting roll, and by the same operation to raise and lower simultaneously the let-off roller.

Heretofore in machines of this character, where it became necessary to separate the cutting roller from the grooved roller, the former was raised (instead of the latter being lowered as in our machine) by a hand lever acting directly on the roller, and owing to the heavy weight of the cutter, was a laborious occupation.

Our invention operates to lower the light grooved roller, leaving the cutter in its normal position, and it consists in the combination with the grooved cutting roll, of a double link arm connecting the same with both the let-off roll and pivotally with the shaft of the take-up roll, a connecting or supporting link arm pivotally connected to said double link and to a lever pivoted on a bracket bolted to the frame of the machine, by means of which hand lever the supporting link and (through it) the double link with the roller connected therewith, may be raised or lowered at pleasure.

In the accompanying drawings illustrating our invention, Figure 1 is a side elevation partly in section. Fig. 2 an end view partly in section; and Fig. 3 a side elevation of the link and lever mechanism detached.

The frame of the machine is indicated at A, in which is mounted the cutting roller B by means of journals b set in recesses in the frame, with set screws b' to adjust it laterally. Said journal b passes through one of said recesses on one side of the frame and supports a pulley E around which is placed a driving belt E', which is driven from a pulley E^2 on one end of a lower driving shaft G mounted in the frame of the machine. The other end of said shaft G has a bevel gear wheel G' which meshes with gear G^2 on the end of a shaft, by means of which gearing, constructed as usual, the friction roller M is driven which operates the take-up N. The latter roller N rests upon the material to be wound up, and is mounted upon a shaft n resting in a fork-bearing n' supported from the frame A of the machine. The shaft m of the friction roll M has its main bearing in the frame of the machine, and passes through a recess in a connecting pin V adjustably secured by a slot and set screw to one end of the double link D whereby the latter may be adjusted as to length of drop. The link D which thus has a pivotal swing on the shaft m, is moved up and down as is also the let-off roll and guide-roll connected thereto, by the action of the lever hereinafter mentioned. A guide post W' is provided between the let-off arms of two double links D D on each side of the machine to properly guide the chenille to be cut and wound up, and acting to some extent as a tension device. The two double links D are fastened together by rods W W passing from one to the other. On the other end of said double link D is provided an open bearing d in which rests the shaft h carrying the let-off roll S. On the same side with the let-off roll there is pivotally connected at d' with the double link D a supporting arm or link T to which is pivotally connected at its other end at r a lever R. A bracket L projects outward from the frame of the machine, and carries a stop s, hanging loosely on the pin s' which secures the lever end to the bracket. Both the lever R and the link T work against this stop s on the up and down movements.

As the essence of our invention lies in the fulcrumed double link D carrying the grooved roll and let-off roll, it is obvious that other means than the arm T and lever L may be employed for temporarily supporting the link D in normal position and moving it up and down when desired. The grooved roller H is constructed as usual, with grooves c, for the entrance of the knives b^2 on the cutting roller B which is also constructed as usual except as

hereinabove mentioned. Said grooved roller H is mounted in the apex of the double link D and is carried up and down thereby when necessary to adjust the same vertically with relation to the cutting roller B. It is thus apparent that instead of the workman raising and lowering the heavy cutting roller B, to separate it from the grooved roller H, as in the old machines, the operation is rendered comparatively easy by moving the lever R up or down against the stop *s*, which limits its movement. The double link D being fulcrumed at one end on the shaft *m*, is raised when the lever is raised, thereby carrying up the grooved roller and the take-up, to normal position, as shown in Fig. 2. When it is desired to lower the grooved roller, the lever R is moved down against the stop *s*, as shown in Fig. 3.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is,

1. The combination with the frame A, the cutting roller B mounted therein, and mechanism to drive the said roller, of a grooved roller H, a double link D in the apex of which the same is mounted, a let-off roller supported by said double link D on its free arm, the other arm of said link D being hinged to the frame of the machine, with means to temporarily sustain said link and its supported rollers in normal position; substantially as described.

2. The combination with the frame A, the cutting roller B mounted therein, and mechanism to drive said roller, of a grooved roller H, a double link D in the apex of which the same is mounted, a let-off roller supported by said double link D on its free arm, the other arm thereof being hinged on the shaft of the friction take-up roller, a lever R hinged to the frame of the machine, and connecting mechanism between said lever and the free end of the link D whereby the latter may be temporarily supported in normal position and also be moved up and down when desired; substantially as described.

3. The combination with the frame A, the cutting roller B mounted therein, and mechanism to drive the said roller, of a grooved roller H, a double link D in the apex of which the same is mounted, a let-off roller supported by said double link D on its free arm, the other arm thereof being hinged on the shaft of the friction take-up roller, a fixed bracket L, a lifting arm T between said link and bracket, a stop *s*, and a lever R operating to raise and lower said lifting arm when desired; substantially as and for the purpose described.

4. The combination with the frame A, the cutting roller B mounted therein, and mechanism to drive the said roller, of a grooved roller H, a double link D on each side of the frame of the machine in the apex of which the roller is mounted, guide post W′ whereby the chenille may be guided and tensioned, a let-off roller supported by said double link D on its free arm, the other arm being hinged on the shaft of the friction take-up roller, a fixed bracket L, a lifting arm T between said link and bracket, and a lever R operating to raise and lower said lifting arm when desired; substantially as and for the purpose described.

In testimony whereof we have hereunto affixed our signatures this 31st day of August, A. D. 1892.

OSWALD LEVER.
WILLIAM S. GRUNDY.

Witnesses:
JOHN J. COOK,
HENRY WOLF.