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G. A. EMERY & W. J. CUNNINGHAM.

RIPPING ATTACHMENT FOR SEWING MACHINES.

(Application filed June 1, 1898.)

(No Model.)

Fig. 1.

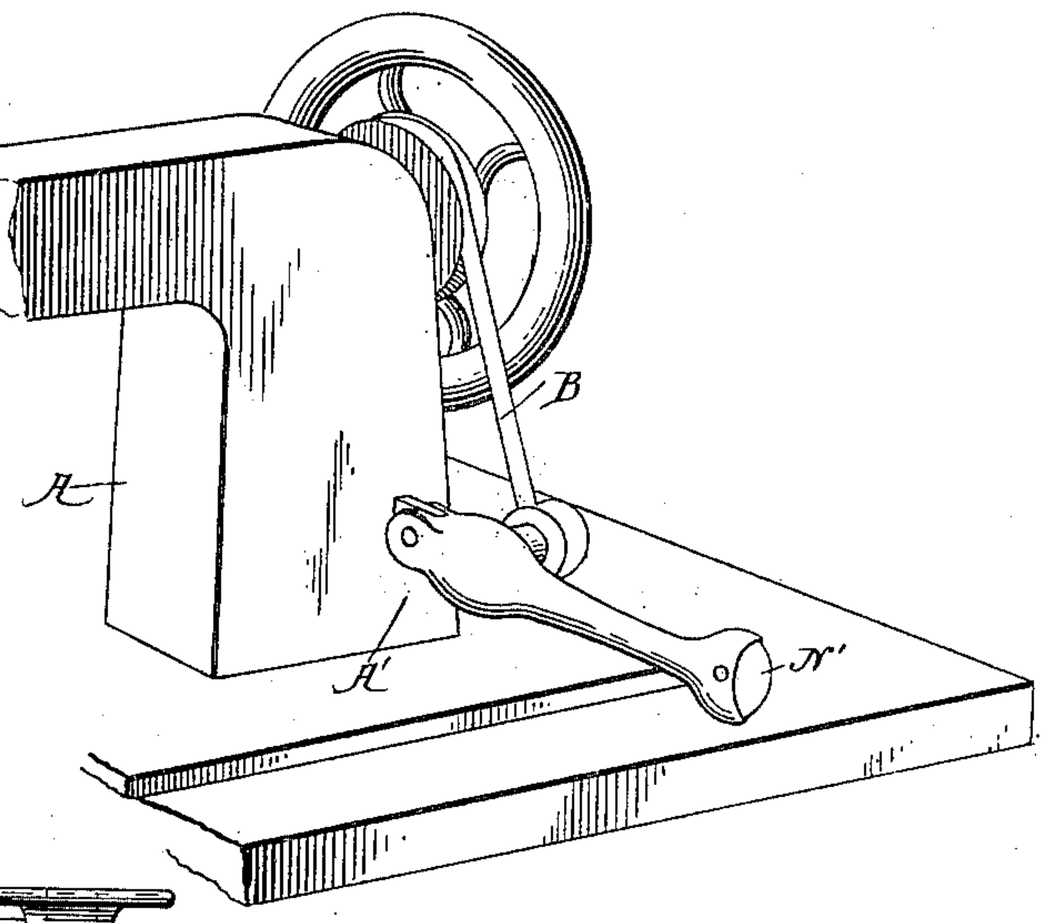


Fig. 2.

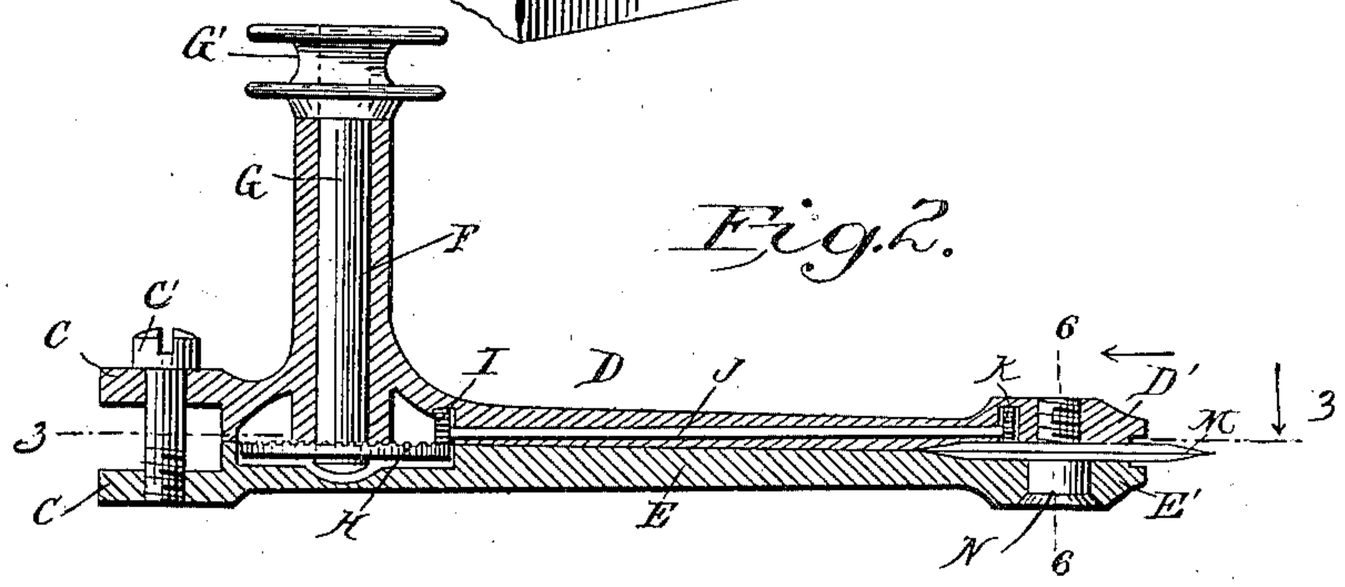


Fig. 3.

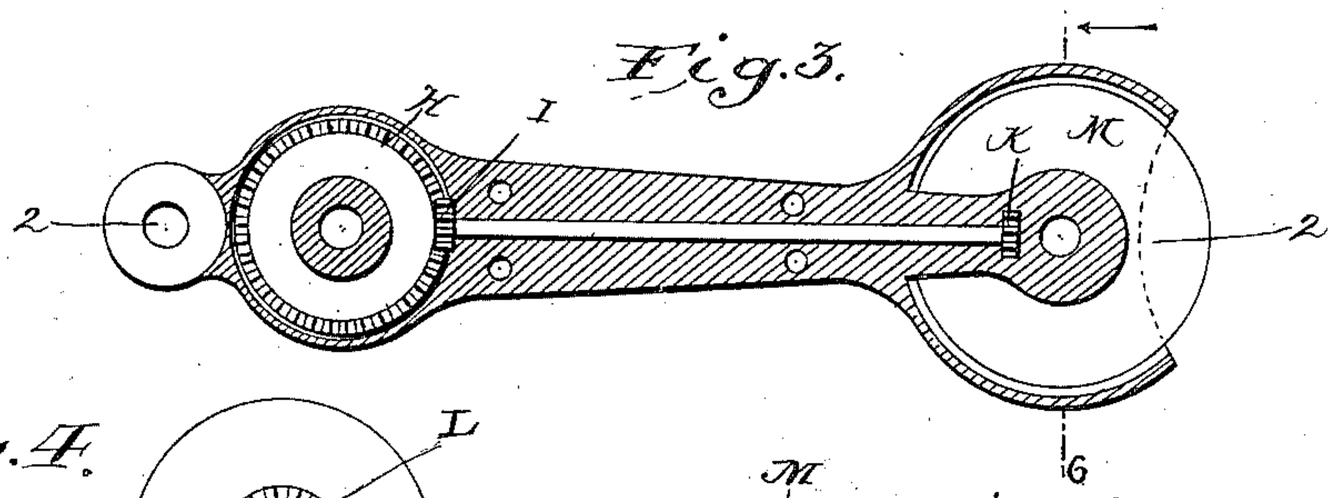


Fig. 4.

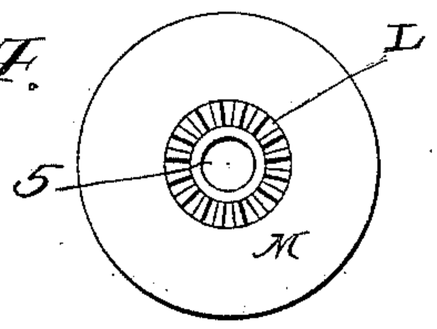
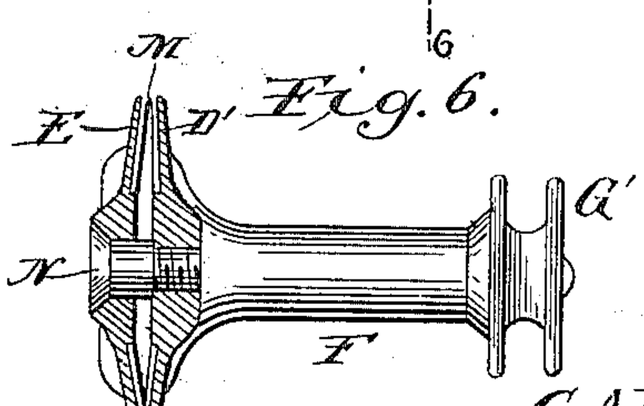


Fig. 5.

Fig. 6.



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UNITED STATES PATENT OFFICE.

GLEN A. EMERY AND WILLIAM J. CUNNINGHAM, OF TOLEDO, OHIO.

RIPPING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 622,672, dated April 11, 1899.

Application filed June 1, 1898. Serial No. 682,309. (No model.)

To all whom it may concern:

Be it known that we, GLEN A. EMERY and WILLIAM J. CUNNINGHAM, citizens of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented a new and useful Ripping Attachment for Sewing-Machines, of which the following is a specification.

Our invention relates to ripping attachments for sewing-machines, and has for its object to generally improve, cheapen, and simplify the construction and increase the utility of such devices.

With this object in view our invention consists in the improved construction, arrangement, and combination of parts hereinafter fully described and afterward specifically pointed out in the appended claim.

In order to enable others skilled in the art to which our invention most nearly appertains to make and use the same, we will now proceed to describe its construction and operation, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of so much of a sewing-machine as is necessary to illustrate our invention having our improved ripping attachment applied thereto. Fig. 2 is a horizontal longitudinal section through our improved ripping attachment on the line 2 2 of Fig. 3, detached from the machine. Fig. 3 is a longitudinal section on the line 3 3 of Fig. 2. Fig. 4 is a face view of the ripping knife or cutter. Fig. 5 is a cross-section through the same. Fig. 6 is a detail sectional view on the line 6 6 of Figs. 2 and 3, looking in the direction of the arrow.

Like letters of reference mark the same parts wherever they occur in the different figures of the drawings.

Referring to the drawings by letters, A indicates the frame of a sewing-machine, and B the driving-belt thereof, a bracket A′ being secured to the front of the frame A and our improved ripping attachment being pivotally secured to said bracket, the attachment being provided with lugs C C to embrace the outer end of the bracket and a horizontal screw C′ to pass through the lugs and the end of the bracket being threaded into one of the lugs in order to securely clamp the attachment in position.

The main body of the attachment consists of two parts D and E, one of the lugs C being attached to the part E and the other to the part D, the part D being also provided with a laterally-projecting hollow stem F. In the stem F is journaled a shaft G, provided on its outer end with a groove-pulley G′, adapted to engage the belt B, and on its inner end, in a recess formed between the two parts D and E, with a crown-wheel H, the teeth of which engage a pinion I on a shaft J, which extends through an opening in the part D and is provided at its outer end with a pinion K, which meshes with the teeth of a crown-wheel L, formed on one face of a ripping-cutter M, which is journaled on a screw N in a space left for its accommodation between the outer ends D′ and E′ of the parts D and E. This cutter stands vertically, and its casing is cut away for about one-third of a circle, as at N′, to expose the edge of the cutter.

The construction of our invention will be readily understood from the foregoing description, and its operation may be described as follows: The parts being in the position as shown, with the groove-pulley G′ in contact with the belt B, the pulley will be thereby rotated, carrying with it the shaft G and crown-wheel H, which in its turn will rotate the pinion I, shaft J, and pinion K, and by the engagement of the pinion K with the crown-wheel L, formed on the cutter, will be rapidly rotated, the speed of the cutter being much more rapid than that of the pulley G′ on account of the difference in diameter of the crown-wheel H and pinion I, this speed being, however, somewhat reduced on account of the crown-wheel L being of a greater diameter than the pinion K. The speed, however, may be regulated by changing the size or number of teeth in the different wheels.

In order to rip a seam, it is only necessary to present the stitches to the exposed edge of the cutter. When the attachment is not required for use, it may be turned up on the screw C′ as a pivot, out of the way, and with the crown-pulley G′ out of contact with the belt.

While we have illustrated and described what we now consider to be efficient means for carrying out our invention, we do not wish to be understood as limiting ourselves to the exact details of construction shown and described, but hold that such slight changes or variations as might suggest themselves to the ordinary mechanic would properly fall within the limit and scope of our invention.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent of the United States, is—

In a ripping attachment for sewing-machines, the combination of the parts D and E, provided at their inner ends with pivotal lugs and at their outer ends with a recess to receive a cutter, the part D being also provided with a laterally-projecting tube or bearing F, the shaft G journaled in said bearing and provided on its outer end with a groove-pulley and at its inner end with a crown-wheel, the shaft J journaled in an opening extending longitudinally through the part D, a pinion on its inner end meshing with the crown-wheel H, a pinion on its outer end, a cutter journaled in the recess between the parts D and E, and a crown-wheel formed on one side thereof, meshing with the pinion K, substantially as described.

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