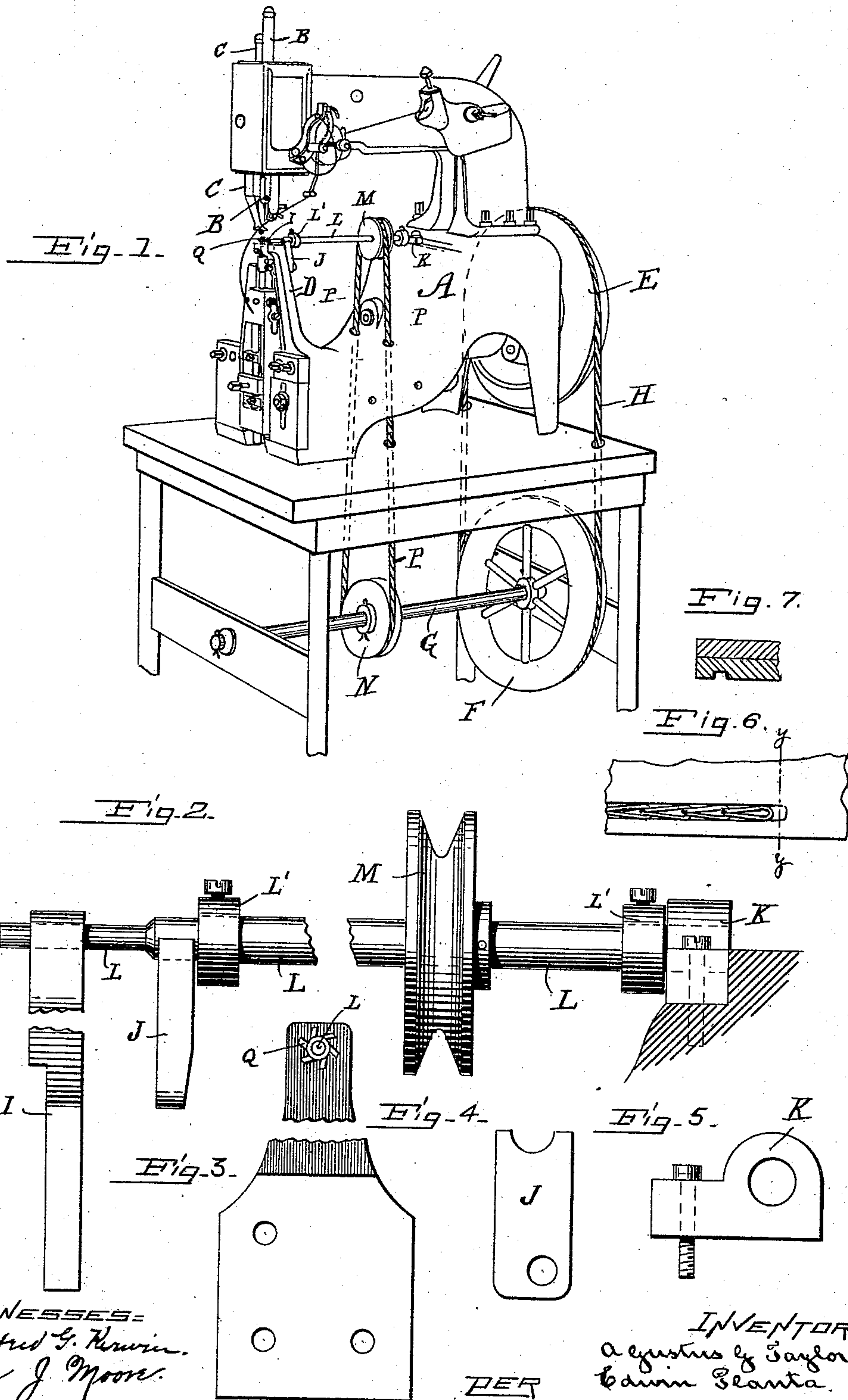


(No Model.)

A. G. TAYLOR.  
GROOVE CUTTING ATTACHMENT FOR SEWING MACHINES.  
No. 543,431. Patented July 23, 1895.



WITNESSES=  
Winifred G. Herwin.  
John J. Moore.

PER

INVENTOR=  
Augustus G. Taylor  
Carroll Blanta.

ATTY-



# UNITED STATES PATENT OFFICE.

AGUSTUS G. TAYLOR, OF PETERBOROUGH, NEW HAMPSHIRE, ASSIGNOR OF  
ONE-HALF TO SAMUEL G. WHITE, OF SAME PLACE.

## GROOVE-CUTTING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 543,431, dated July 23, 1895.

Application filed September 11, 1890. Serial No. 364,614. (No model.)

*To all whom it may concern:*

Be it known that I, AGUSTUS G. TAYLOR, a citizen of the United States, residing at Peterborough, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Groove-Cutting Attachments for Sewing-Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to a sewing-machine known as the "fair-stitch" machine, employed for sewing harness, belts, boots, shoes, and the like.

The invention consists of a rotary vibrating cutter mounted in front of the needle, so that as the material is fed toward the needle a groove or channel is cut therein.

Referring to the accompanying drawings, Figure 1 is a perspective view of a fair-stitch machine having an attachment according to my invention for sinking the stitches below the surface. Fig. 2 is a side view of my attachment for sinking the stitches below the surface. Fig. 3 is a view of the front bearing and rotary cutter. Figs. 4 and 5 are views of the bearing for the shaft carrying the rotary cutter. Fig. 6 is a view of the under side of the leather, showing a portion of it grooved and stitched. Fig. 7 is a section taken on line *yy* of Fig. 6, showing the groove.

A represents a fair-stitch sewing-machine, B being the needle-bar, and C the presser-foot.

D is the horn, E the driving-pulley, and F a wheel mounted upon a shaft G, to which motion is imparted from any suitable source, the wheel F communicating motion to the pulley E by a belt H, all in the ordinary manner.

To the loop-former is secured a bearing I, and to the rear of the horn is pivoted a bearing J, and a bearing K is also fulcrumed to the body of the machine. In these bearings is mounted a shaft L, upon which is secured a pulley M driven by a belt P from a pulley

N on the shaft G. The outer end of the shaft L is turned down to a smaller diameter and has mounted thereon a rotary cutter Q. As the shaft L turns to the right, I form its end with a left-hand screw-thread, upon which the cutter Q is screwed, so that it can be readily removed when desired, but when in operation the tendency is to tighten it upon the shaft.

The object of having the two bearings J K pivoted is to allow for the movement made by the loop-former. As the front bearing I is secured thereto it has, of course, a corresponding reciprocating movement imparted to it. L' L' are collars to prevent the shaft L from working out of the bearing.

The rotary cutter Q is of such a diameter that it projects the desired distance through and above the needle-plate, according to the depth of groove it is desired to cut in the leather, so as to embed the stitches.

In operation the leather to be stitched is fed in the ordinary manner, but as it comes into contact with the rotary cutter Q just before it comes to the needle (the cutter being on a line with the same) it is cut or grooved out so that the stitches are formed in the groove and not upon the surface of the leather, as with some fair-stitch machines now in use.

What I claim as my invention is—

In combination with a fair stitch sewing machine a rotating vibrating shaft L, mounted in pivoted bearings J, K, and bearing I, secured to the loop former, a rotary cutter Q, mounted on the end of said shaft on a line with but in advance of the needle and means for imparting a rotary motion to said shaft substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 1st day of September, A. D. 1890.

AGUSTUS G. TAYLOR.

Witnesses:

C. A. JAQUITH,  
S. R. CUTLER.