

ALBIN WARTH.

Machines for Cutting Textile Fabrics.

Fig. 1.

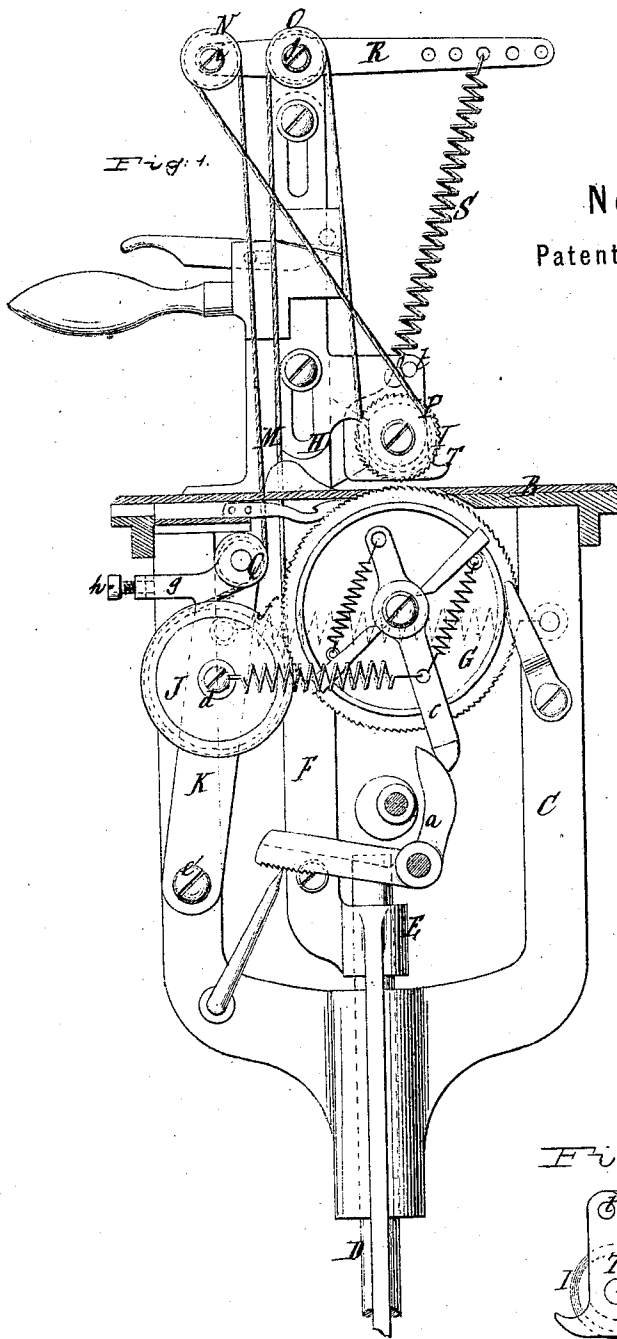


Fig. 2.

No. 124,179.
Patented Feb. 27, 1872.

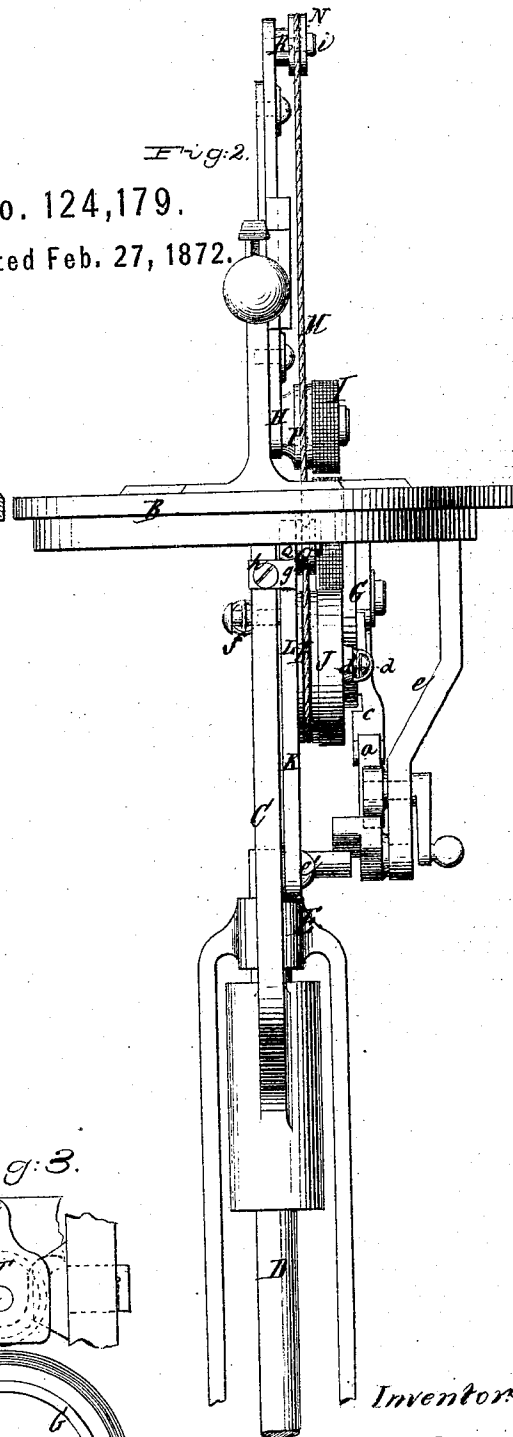
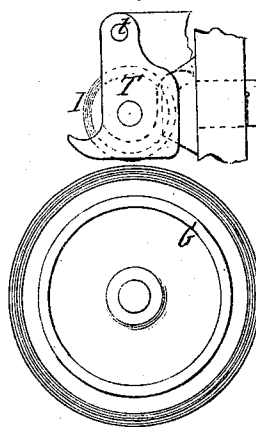


Fig. 3.



Witnesses.
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ALBIN WARTH, OF STAPLETON, NEW YORK.

IMPROVEMENT IN MACHINES FOR CUTTING TEXTILE FABRICS.

Specification forming part of Letters Patent No. 124,179, dated February 27, 1872.

To all whom it may concern:

Be it known that I, ALBIN WARTH, of Stapleton, in the county of Richmond and State of New York, have invented a new and Improved Machine for Cutting Textile Fabrics; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a sectional front view of this improvement. Fig. 2 is an end view of the same. Fig. 3 is a front view of a modification of the feed-rollers.

Similar letters indicate corresponding parts.

This improvement relates particularly to the feed mechanism of that class of machines for which Letters Patent were granted to me August 2, 1870, No. 106,101, and March 14, 1871, No. 112,752; but, if desired, this improvement is also applicable to other machines in which textile or other fabrics are fed to a cutting or piercing instrument. My present invention consists in combining a tension-lever with a surface-feed, a driving-belt, and a roller, as hereinafter more fully set forth. The invention further consists in pivoting a knife-protector or foot to the presser-bar in such a manner as to prevent the material on the platform from being lifted up when the cutting instrument rises, or to release the material by being turned up.

In the drawing, the letter B designates the platform or cloth-plate, which is intended to be fitted in a suitable table or frame, so that it can be freely revolved in either direction. From the under surface of this platform extends a hanger, C, in which is firmly secured the rod D that forms the guide for the sleeve E, from the top part of which extends the cutter-bar F, and to which a rising-and-falling motion is imparted by any suitable mechanism. From the platform B also extends a bracket, e, to which is pivoted a bell-crank lever, a, which is actuated by a stud, b, projecting from the rising-and-falling cutter-bar. Said bell-crank lever actuates the dog c, which propels the bottom feed-wheel G, this dog and feed-wheel being of the ordinary construction, as applied in many sewing-machines. With

the bottom feed-wheel G is combined a surface feed-wheel, I, which has its bearing on a stud secured in the presser-bar H, and to which the motion of the bottom feed-wheel G is transmitted by the following means: J is a roller, covered with India rubber or other soft material and mounted on a stud, d, secured in a lever, K, which is connected to the hanger C by a pivot, e', and which is drawn up toward the feed-wheel G by a spring, f, so that the face of the roller J is held in close contact with the face of the feed-wheel, and that the rotary motion of said feed-wheel is transmitted to the roller without fail. From the lever K extends an arm, g, which overlaps the edge of the hanger C, and in which is secured a set-screw, h, so that the pressure between the faces of the roller J and feed-wheel G can be regulated. To the roller J is secured a belt-wheel, L, (see Fig. 2.) and a belt, M, is made to pass from this belt-wheel up over guide-rollers N O, and then down under a belt-wheel, P, connected to the surface feed-wheel I. A guide-roller, Q, secured to the lever K, assists in giving to the belt M the required position. The guide-roller N is mounted on a stud, i, secured in a lever, R, which has its fulcrum on a pivot, j, secured in the upper end of the presser-bar, and from the arm of said lever, opposite the roller N, extends a spring, S, down to a fixed portion of the presser-bar, so that, by the action of said spring, the belt M is always held at the required tension. By hitching the spring to the lever K at a greater or smaller distance from the fulcrum of said lever the tension of the belt M can be regulated. The tension of the belt M may be further regulated by constructing the presser-bar in two parts, so that it can be shortened or lengthened and that the roller O can be raised or lowered together with the lever R and roller N. By this arrangement the rotary motion of the bottom feed-wheel G is transmitted to the surface feed-wheel I, and in feeding a pile of many layers of textile or other material through between the two feed-wheels all danger of wrinkling either of the layers is obviated. In many cases, however, it is desirable to preserve an unbroken surface of the platform B, and in such cases the bottom feed-wheel is dispensed with and an intermittent rotary motion is imparted directly

to the roller J, either by a dog, *c*, and bell-crank lever *a* or by any other suitable means. To the presser-bar is attached a foot, T, (best seen in Fig. 3,) which swings on a pivot, *t*, and bears down upon the material on the platform, preventing the same from being lifted up when the cutting instrument rises. This foot can be turned up so as to release the material on the platform.

What I claim as new, and desire to secure by Letters Patent, is—

1. The tension-lever R, in combination with the surface feed-wheel I, belt M, and roller J, substantially as described.

2. A knife-protector or foot, T, pivoted upon the presser-bar, substantially as described, for the purpose set forth.

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Witnesses:

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