A. & H. WARTH.

Machine for Cutting Textile and other Fabrics.

No. 225,031. Patented Mar. 2, 1880.

Fig. 1.

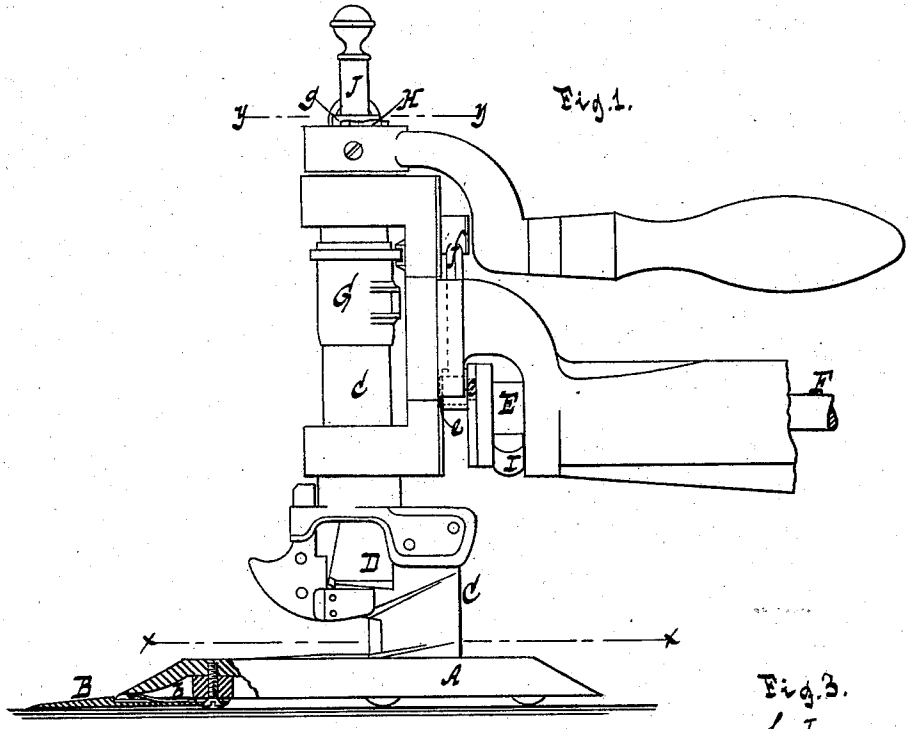


Fig. 2.

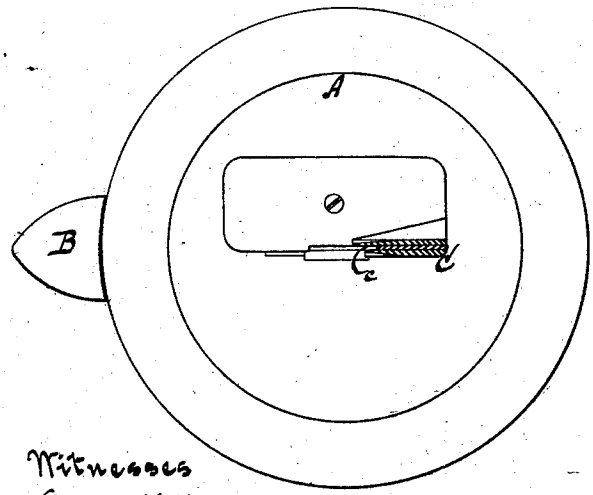


Fig. 3.

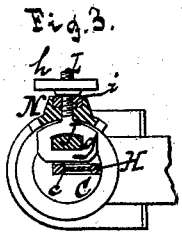
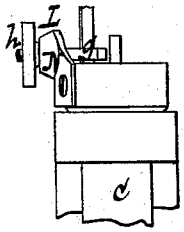


Fig. 4.



Witnesses
Otto Hufeland
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by
Van Santvoord & Hauff
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UNITED STATES PATENT OFFICE.

ALBIN WARTH AND HENRY WARTH, OF STAPLETON, NEW YORK.

MACHINE FOR CUTTING TEXTILE AND OTHER FABRICS.

SPECIFICATION forming part of Letters Patent No. 225,031, dated March 2, 1880.

Application filed November 13, 1879.

To all whom it may concern:

Be it known that we, ALBIN WARTH and HENRY WARTH, both of Stapleton, in the county of Richmond and State of New York, have invented a new and useful Improvement in Machines for Cutting Textile and other Fabrics, which invention is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a side view, partly in section, of our machine. Fig. 2 is a horizontal section in the line *x x*, Fig. 1. Fig. 3 is a similar section in the line *y y*, Fig. 1. Fig. 4 shows a portion of the standard.

Similar letters indicate corresponding parts.

This invention relates to that class of machines described in Letters Patent of the United States issued to Albin Warth, May 26, 1874, No. 151,456, and July 13, 1875, No. 165,636; and it consists in certain novel combinations of parts hereinafter fully described, and pointed out in the claims.

In the drawings, the letter A designates a foot-plate carrying the cutting mechanism. This plate is provided with a gravitating toe, B, which catches beneath the material to be cut and conducts the same up on the foot-plate, where it is cut. When the machine is worked rapidly the toe B is liable to jump on the work-table and produce a disagreeable noise; and to overcome this objection we combine with the toe a spring, *b*, which acts on the toe to force the same away from the foot-plate. In other words, the spring *b* forms an elastic bearing for the toe B, and it is obvious that the latter is thereby steadied or prevented from jumping in the operation of the machine. In this example the spring *b* is attached to the toe B, but it may, if desired, be attached to the foot-plate.

The letter C designates the standard of the machine rising from the foot-plate A, and having two grooves—one for the knife-slide and knife and the other for the presser-slide. That part of the standard C which enters the cut of the cloth is flat, and the knife-groove *c* is open on one edge at that point, from which open edge of such groove the knife D protrudes. The sides of the knife-groove *c* were heretofore flush with each other on the open edge of the groove, and hence an abrupt wide or thick edge was presented to the cut of the cloth by the standard. In order to reduce this edge—namely, the open edge of the knife-groove *c*—we cut off a portion of the standard on one side of the knife-groove, so that one side of the groove is in advance of the other, as shown in Fig. 2. It follows that the two sides of the knife-groove *c* enter the cut of the cloth one after the other, and since the standard C thus obtains a tapered or graduated edge its entrance into the cut of the cloth is materially facilitated.

Motion is given to the cutting mechanism by a disk, E, which is mounted on a driving-shaft, F, and carries an eccentric wrist-pin, *e*, connecting, by a pitman, *f*, with a sleeve, G, which embraces the standard C and carries the knife-slide H.

At a point opposite the wrist-pin *e* we provide the disk E with a balance-weight, I, the function of which is to overcome the momentum of the cutting mechanism when the machine is in operation.

By the momentum referred to the foot-plate A is liable to jump or vibrate on the work-table, particularly when the machine is worked rapidly, which makes it difficult for the operator to follow the lines of the pattern marked on the cloth to be cut. Without the balance-weight I it is impracticable to exceed twelve hundred revolutions per minute of the disk E, whereas by its use the revolutions of the disk can be increased to a large extent without danger of vibrating the foot-plate.

The letter J designates the presser-slide, which is arranged in the appropriate groove of the standard, and is in juxtaposition to the knife-slide H. Heretofore a pressure-screw was used to clamp the presser-slide J, and owing to the contiguity thereto of the knife-slide H the latter was liable to be crowded in its groove, which obviously interfered with the successful operation of the machine. To overcome this objection we make use of a clamp, L, which acts on the presser-slide J by traction, and in this example the clamp is composed of an eyebolt, *g*, embracing the presser-slide, and of a thumb-nut, *h*, fitted on the shank of the eyebolt, this shank being screw-threaded. The shank of the eyebolt *g* passes through a support, N, consisting of a lug se-

cured to the machine-frame, and on the face of this support, surrounding the shank of the eyebolt, is arranged an elastic bearing, *i*, for the thumb-nut *h*. When the thumb-nut *h* is tightened the eyebolt *g* is drawn toward it, thereby clamping the pressure-slide J, while at the same time the nut becomes wedged on the elastic pad or bearing *i*, whereby it is prevented from working loose. It follows that the presser-slide J is firmly held in the position to which it may be adjusted.

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

1. The combination, with the foot-plate and its gravitating toe, of a spring which acts on the toe so as to prevent the same from jumping in the rapid operation of the machine, substantially as shown and described.

2. In combination with the foot-plate and cutting-knife, a standard having a knife-groove which is open on one edge, and one side of which extends in advance of the other, thereby facilitating the entrance of said standard into the cut of the cloth, substantially as shown and described.

3. In combination with the cutting mechanism and foot-plate, a revolving disk, which carries an eccentric wrist-pin connecting with the cutting mechanism, and also carries a balance-weight at a point opposite the wrist-pin, to overcome the momentum of the cutting mechanism, and thereby prevent vibrations of the foot-plate, substantially as shown and described.

4. In combination with the standard and the presser-slide, a traction-clamp for holding the presser-slide, consisting of an eyebolt embracing the slide and a thumb-nut fitted on the eyebolt, and a support for the clamp, having an elastic bearing for the thumb-nut, whereby it is prevented from working loose, substantially as shown and described.

In testimony that we claim the foregoing we have hereunto set our hands and seals this 8th day of November, 1879.

ALBIN WARTH. [L. S.]
HENRY WARTH. [L. S.]

Witnesses:
W. HAUFF,
CHAS. WAHLERS.