A. WARTH.

Machine for Cutting Textile Fabric.

No. 202,900. Patented April 23, 1878.

Fig.1.

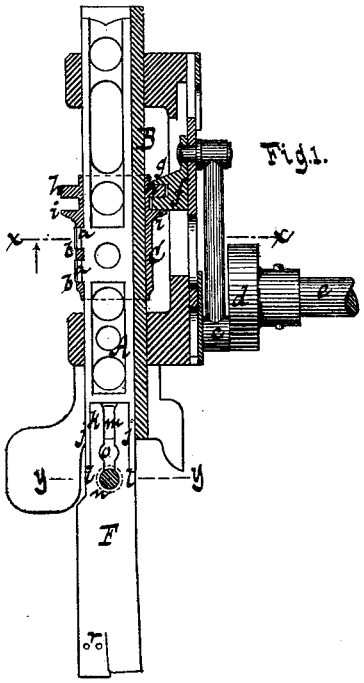


Fig.5.

Fig.2.

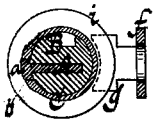


Fig.3.

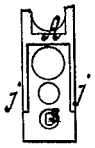
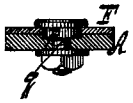


Fig.4.



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. **202,900**, dated April 23, 1878; application filed February 20, 1878.

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 useful Improvement in Machines for Cutting Textile and other Materials, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a sectional side elevation. Fig. 2 is a horizontal section in the plane *x x*, Fig. 1. Fig. 3 is a face view of a portion of the knife-rod. Fig. 4 is a transverse section of the knife and knife-rod in a larger scale than the previously mentioned figures, the plane of section being indicated by the line *y y*, Fig. 1. Fig. 5 is a front view of the sleeve.

Similar letters indicate corresponding parts.

This invention relates to certain improvements on that class of machines for cutting textile and other materials which I have described in my Patents No. 106,101, dated August 2, 1870, No. 151,456, dated May 26, 1874, and particularly in the Patent No. 165,636, dated July 13, 1875.

The particular parts to which my present improvements relate are the means for producing a firm and durable connection between the knife and the knife-rod; also, the means of forming a durable connection between the knife-rod and the sleeve, and between the sleeve and the connecting-rod.

In the drawing, the letter A designates the knife-rod, which is fitted into the standard B, and from which project two lugs, *a a*, which engage with slots *b b*, Fig. 5, in the sleeve C. This sleeve embraces the standard B, and a reciprocating motion is imparted to it by an eccentric wrist-pin, *c*, secured to a disk, *d*, which is firmly mounted on the shaft *e*, said eccentric wrist-pin being connected by a slide, *f*, which engages with the sleeve C by means of a fork, *g*. The sleeve is provided with two rims, *h i*, the upper rim *h* being made to fit nicely between the two prongs or projections of the fork *g*, while the lower prong of the fork fits nicely between the two rims *i* of the sleeve.

In my former patents above named the sleeve is provided with a single rim, which engages with the fork *g*, and I have found that in a short time these parts wear out, and the machine, when rapidly operated, makes a disagreeable noise. By providing the sleeve with two rims, this difficulty is obviated to a great extent, since I have provided four faces of contact instead of only two, and, unless all four faces wear off uniformly, the steady motion of the machine is not disturbed. In the machine described in my Patent No. 165,636 the connection between the sleeve and the knife-rod was effected by a single lug, and on account of the very rapid motion of the knife-rod this lug was liable to wear off and allow the sleeve to work loose. This difficulty I have avoided by providing the knife-rod with two lugs, *a a*, as above described, and I find that I am enabled to work my machine for a long time without incurring the danger of having the sleeve work loose. The connection between the knife F and the knife-rod A is effected as follows: The knife-rod is provided with two raised rims, *j j*, and the shank *k* of the knife fits between these rims, and is provided with two shoulders, *l l*, which bear against the ends of said rims when the knife is new and not worn off. In the shank of the knife is a slot, *m*, with two enlargements, *n o*, which are large enough to admit the enlarged part *p* of the screw *q*, while the main portion of the slot *m* is just large enough to admit the flattened body of said screw. The knife-rod is provided with apertures *s*, (see Fig. 3,) which are countersunk to admit the enlarged part *p* of the screw. If the screw *q* is passed through the knife and through one of the enlargements *n* of the shank of the knife, said knife is firmly retained in position, and it is not liable to slide in or out, and when the knife has worn out to the marks *r* it is broken off and resharpened, and then it is drawn out, so that the screw *q* catches in the second enlargement *o* of the knife, when said knife is again firmly retained in position.

In the machine described in my Patent No. 165,636 the knife has a plain slot, and it is retained simply by the pressure exerted by the retaining-screw; but I have found that in this case the knife is liable to work loose, and to cause a disturbance in the operation of the machine, and, particularly after the knife has worn off, I have not been able to readjust it

again, so as to be able to work it with safety. This difficulty I have obviated by the enlargements *n o* in the slot of the knife, and by the countersink in the knife-rod, both said enlargements and the countersink being adapted to engage with the enlarged part *p* of the screw.

I do not claim in this application anything shown and described in my patents above named.

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

1. The combination, with the knife F and the knife-rod A, of a screw, *q*, having an enlarged part, *p*, a slot, *m*, in the knife, provided with one or more enlargements, *n o*, adapted to receive the enlarged part *p* of the screw *q*, and a hole in the knife-rod provided with a countersink, also adapted to receive the enlarged part of said screw, all constructed and adapted to operate substantially as shown and described.

2. The combination, with the knife-rod A, standard B, and sleeve C, of the lugs *a a*, adapted to engage with corresponding slots in the sleeve, substantially as and for the purpose set forth.

3. The combination, with the knife-rod A, standard B, and sleeve C, of two rims, *h i*, and a fork, *g*, substantially as and for the purpose described.

4. The knife F, having a slot, *m*, with one or more enlargements, *n o*, substantially as and for the purpose shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 18th day of February, 1878.

ALBIN WARTH. [L. S.]

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.