2 Sheets—Sheet 1.

A. WARTH.

Machine for Cutting Textile and other Fabrics.

No. 213,017. Patented Mar. 4, 1879.

Fig. 1.

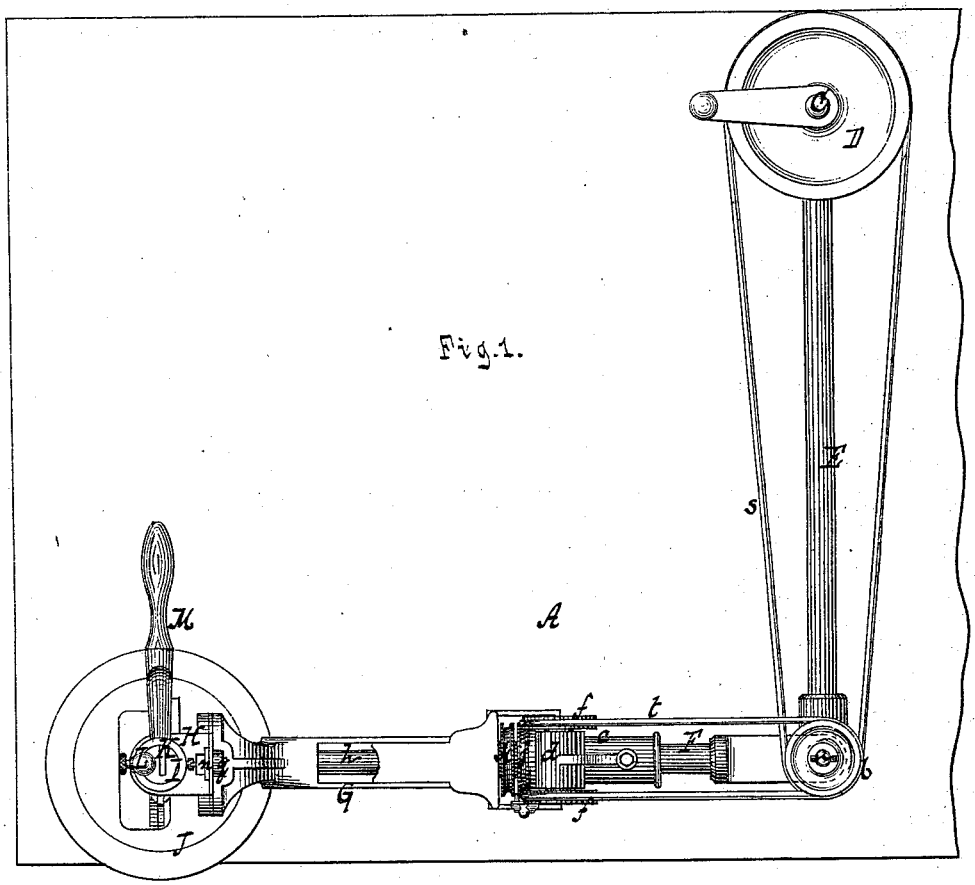
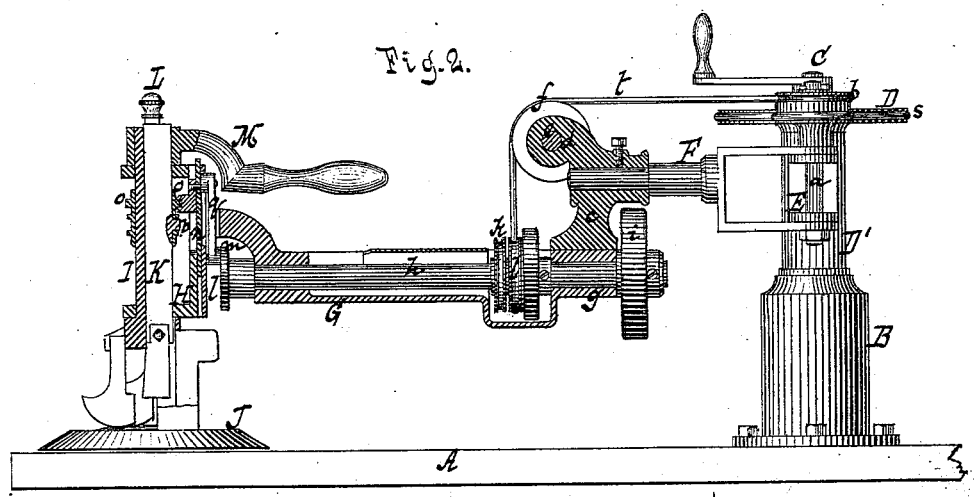


Fig. 2.



Witnesses
Otto Stupland
Wm Miller

Inventor
Albin Warth
by Van Santvoord & Hauff
his attorneys.

2 Sheets—Sheet 2.

A. WARTH.

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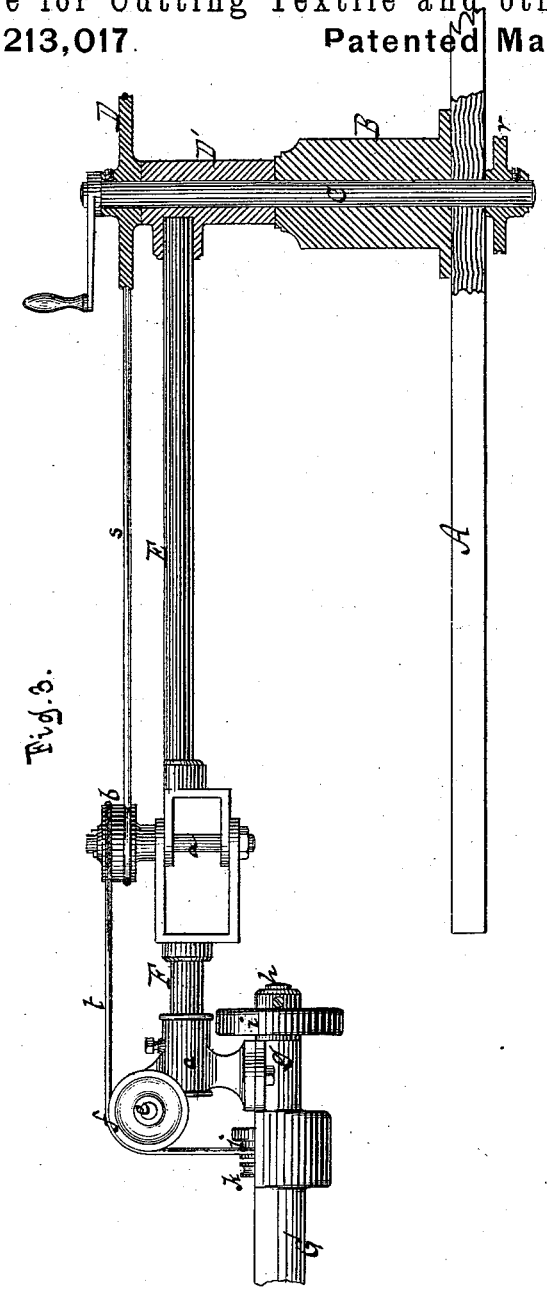

Fig. 3.

Witnesses
Otto Stupland
Wm Miller.

Inventor.
Albin Warth.
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UNITED STATES PATENT OFFICE.

ALBIN WARTH, OF STAPLETON, NEW YORK.

IMPROVEMENT IN MACHINES FOR CUTTING TEXTILE AND OTHER FABRICS.

Specification forming part of Letters Patent No. **213,017**, dated March 4, 1879; application filed January 10, 1879.

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 invention is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a plan or top view. Fig. 2 is a sectional side elevation of the cutter-head and its connections. Fig. 3 is a sectional elevation of the fixed standard and its connections.

Similar letters indicate corresponding parts.

This invention consists in the combination, in a machine for cutting textile and other materials, of a cloth-lifting foot-plate, a pillar rising from said foot-plate, a knife-rod guided in and a handle secured to the top of said pillar, a sleeve which fits the pillar and engages with the knife-rod, a bracket in which the pillar is free to rotate, a fixed standard which connects with said bracket by two jointed arms, a shaft which has its bearings in the fixed standard, and mechanism for imparting a reciprocating motion to the knife-rod, which mechanism is supported by the jointed arms, so that the cloth-lifting foot-plate, together with the cutting mechanism supported thereby, can be moved freely round the fixed standard in various directions without disconnecting the mechanism for imparting motion to the knife-rod. With the jointed arms is combined a hanger, which forms the bearing for a shaft, to which a revolving motion is imparted by belts, and which serves to impart a reciprocating motion to the knife-rod, said shaft being provided with a fly-wheel, so as to insure a uniform motion of the knife-rod.

In the drawings, the letter A designates a table, from which rises a fixed standard, B. This standard forms the bearings for a vertical shaft, C, on the upper end of which is mounted a pulley, D, and on which is fitted a sleeve, D′, (see Fig. 3,) that is free to turn round independent of said shaft and standard. From the sleeve D′ extends an arm, E, in the outer bifurcated end of which is firmly secured a vertical arbor, *a*, that forms the connection between the arm E and a second arm, F, and on the upper end of which is loosely mounted a double-grooved pulley, *b*. To the end of the arm F is firmly secured a hanger, *c*, which is provided at its top with a transverse socket, *d*, for the reception of an arbor, *e*, on which are mounted two guide-pulleys, *f*, while to the bottom end of said hanger is secured a journal-box, *g*, which forms the bearing for the inner end of a shaft, *h*, and from which extends an arm, G, (see Fig. 2,) for the support of the outer end of said shaft. On this shaft is mounted a fly-wheel, *i*, and a fast pulley, *j*, a loose pulley, *k*, and a disk, *l*, which carries an eccentric wrist-pin, *m*. To the outer end of the arm G is firmly connected a **U**-shaped bracket, H, in which turns freely a hollow pillar, I, which rises from the cloth-lifting foot-plate J. The pillar I forms the guide for the knife-rod K and for the presser-bar L, and on its upper end is secured a handle, M, which serves to turn the cutter-head round in the bracket H. In this bracket is fitted a slide, *n*, which engages with a sleeve, *o*, fitted on the pillar I, and the knife-rod K is provided with a tooth, *p*, which engages with the sleeve *o*, so that by means of the slide and the sleeve a reciprocating motion can be imparted to the knife-rod, the connection between the slide and sleeve being such that the pillar, together with the knife-rod and the sleeve, can be turned round in either direction without throwing the sleeve out of gear with the slide. The reciprocating motion of the slide is produced by a rod, *q*, which extends from the eccentric wrist-pin *m* of the disk *l*.

The shaft C in the fixed standard B receives a revolving motion by a pulley, *r*, mounted on its lower end, or it may be turned by a hand-crank, and from the pulley D on the upper end of this shaft extends a belt, *s*, round the lower groove of the pulley *b*. From the upper groove of this pulley extends a belt, *t*, over the guide-pulleys *f* to the pulley *j* on the shaft *h;* and if the shaft C is turned the required motion is transmitted to the knife-rod K, and at the same time the foot-plate, together with the cutting mechanism, can be conveniently turned round and moved in various directions without throwing the cutting mechanism out of gear with the driving-shaft C.

It will be noticed from this description that the cutter-head, which is composed of the foot-

plate J, the pillar I, the knife-rod K, and the handle M, is precisely the same as that described in Letters Patent granted to me May 26, 1874, No. 151,456, while the mechanism for supporting and guiding the cutter-head is similar to that described in the English Patent No. 2,896 of the year 1855, and also to the device described in the patent of R. T. Smith, No. 59,089, dated October 23, 1866. I do not therefore claim, broadly, as my present invention the combination of a cutting mechanism with jointed arms.

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

1. The combination, in a machine for cutting textile and other materials, of a cloth-lifting foot-plate, a pillar rising from said foot-plate, a knife-rod guided in and a handle secured to the top of said pillar, a sleeve which fits the pillar and engages with the knife-rod, a bracket in which the pillar is free to rotate, a fixed standard which connects with said bracket by two or more jointed arms, a shaft which has its bearings in the fixed standard, and mechanism for imparting a reciprocating motion to the knife-rod, which mechanism is supported by the jointed arms, all constructed and adapted to operate substantially as and for the purpose herein shown and described.

2. The combination, with the fixed standard B, jointed arms E F, and pulleys D *b*, of a hanger, *c*, arm G, shaft *h*, fly-wheel *i*, eccentric wrist-pin *m*, slide *n*, sleeve *o*, pillar I, foot-plate J, and knife-rod K, all constructed and adapted to operate substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 3d day of January, 1879.

ALBIN WARTH. [L. S.]

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