# GEORGE WESTERHAUSER.

## Machines for Cutting Cloth.

No. 128,194. Patented June 18, 1872.

Fig. 3.

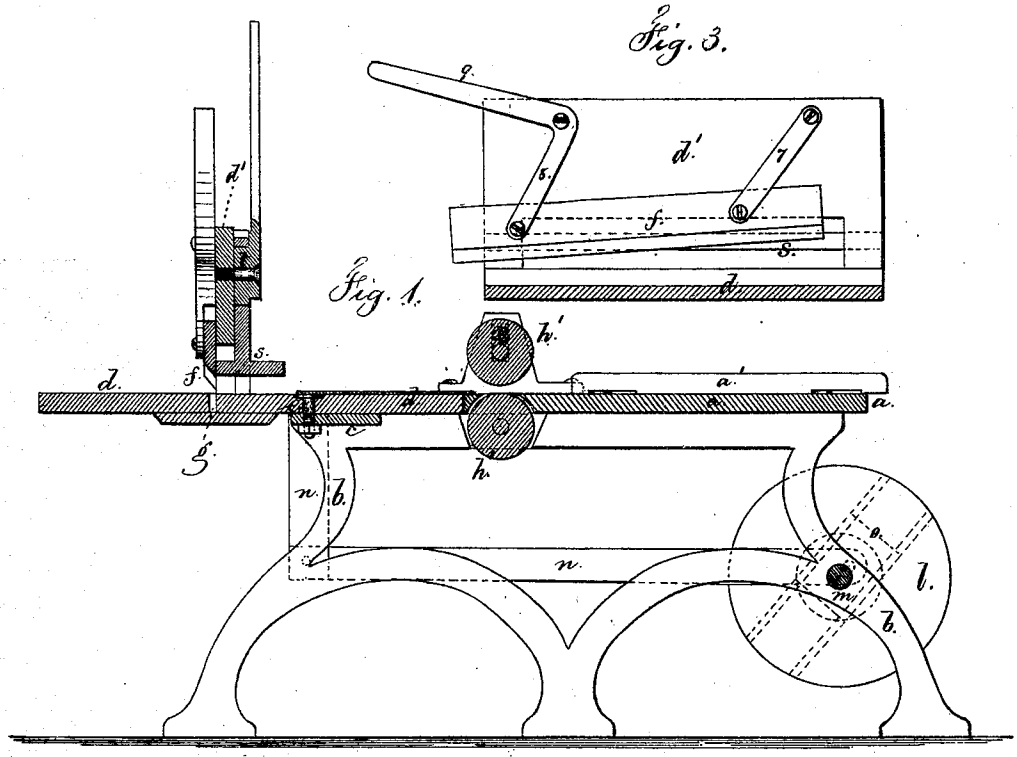
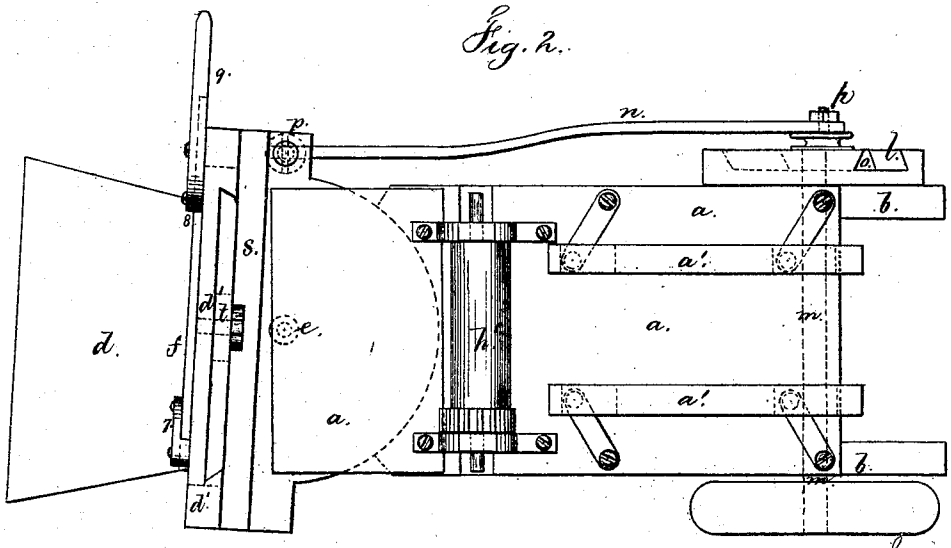



Fig. 2.




Witnesses,
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# UNITED STATES PATENT OFFICE.

GEORGE WESTERHAUSER, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF AND CHARLES W. BROADBENT, OF SAME PLACE.

## IMPROVEMENT IN MACHINES FOR CUTTING CLOTH.

Specification forming part of Letters Patent No. 128,194, dated June 18, 1872.

*To all whom it may concern:*

Be it known that I, GEORGE WESTERHAUSER, of Brooklyn, in the county of Kings and State of New York, have invented a certain Improvement in Machines for Cutting Cloth, &c.; and the following is declared to be a correct description thereof.

This machine is for the purpose of cutting triangular pieces of cloth or similar material from a roll for umbrellas, parasols, &c. The angle of the cutter to the cloth can be adjusted to suit the size and shape of the triangular piece of cloth required to be cut. My invention consists in a moving shear mounted upon a swinging bed, in combination with a bed upon which the cloth or other material is laid, and with feeding-rollers or a similar device to carry the cloth forward the proper distance when the shear is lifted.

In the drawing, Figure 1 is a longitudinal section, and Fig. 2 is a plan of said machine, and Fig. 3 is an elevation of the shear and shear-plate.

*a* is the main bed of the machine, upon which the desired number of thicknesses of material is to be laid. *a'* are guides for the edges of the fabric. These are connected by parallel-motion bars and clamped when adjusted to position; and *h' h'* are feeding-rollers, geared together. The bed *a* is supported by the frame *b*, which also carries the support *c* for the shear-bed *d*. This bed *d* swings horizontally upon the pin *e*, that is central crosswise of the bed *a*. The shear *f* is hung at the side of the vertical plate *d'* upon the bed *d*, and enters the groove *g* when cutting; or any suitable cutting-knife may be used. The knife or shear *f* is attached to the plate *d'* by links 7 and 8, the latter of which is extended to form an actuating-handle, 9; and these links are not parallel. Therefore one end of the knife will commence to cut first with a shearing cut. The bed *d* swings upon the pin *e*, thus bringing the shear diagonal to the bed *a*. The cloth is fed to the knife by rollers *h' h'*, which are to be actuated when the cutting-knife is raised; and I remark that the machine may be entirely automatic in its action, or the knife and feed may be actuated by hand. The descent of the knife cuts off the cloth at the angle to which the knife may have been placed; and when the pieces are to be narrow at one end and wide at the other, as in umbrellas, it is necessary for the knife to be shifted between every cut so as to bring the angle in the other direction. For this purpose I employ the wheel *l* upon the shaft *m* and the pitman *n*, attached to the bed *d* at *p*. The pitman *n* is connected to the wheel *l* by a movable crank-pin, *h*, in the block *o*, which block *o* slides in a transverse groove in the wheel *l* so as to be adjusted at any desired distance from the center of the wheel *l;* and thus, when the wheel *l* is revolved, the pitman *n* will swing the bed *d* and shear upon the pin *e*, and bring the same at an angle to the bed *a* proportionate to the movement given from the crank-pin in the block *o*.

The revolution of the shaft *m* should be intermittent, stopping long enough at the extremes of motion of the pitman for the knife to descend and cut off the cloth. The change of angle of the knife and the feed takes place at nearly the same time, and the wheel *l* makes half a revolution each change in the angle of the knife, so that the cut pieces are triangular or trapezoidal in shape.

By these means the cloth can be kept smooth, and the pieces will be uniform in size and shape, and the shape can be varied at will.

The feeding device may be two plates, between which the cloth is pressed as they are moved forward, and released during their backward movement. As soon as the knife is moved to the desired angle the operator clamps the fabric, by means of a slide, *s*, operated by a cam, *t*, and lever, and this slides vertically at the back of the plate *d'*, and is released before the feed takes place or the position of the knife is changed.

I am aware that a knife has been hung by two links to act with a shearing cut. By my construction, the links not being parallel, the knife swings down with a shearing cut, and rises again to an inclined position by a continuation of the movement; and the same thing occurs when the knife is swung in the other direction. Hence there is no pause in the movement until the knife rises from the fabric.

I claim as my invention—

1. The swinging bed and shear combined

with the bed for the material to be cut, and the feeding device, substantially as and for the purposes set forth.

2. The wheel *l*, adjustable block *o*, crank-pin *p*, pitman *n*, and swinging shear *f*, in combination with the bed *a* and feeding device, substantially as set forth.

3. A knife or shear, *f*, connected by the links 7 and 8 to the plate *d'*, and actuated by the lever 9 in the manner specified, so that the shear rises to an inclined position by a continuation of the movement that brought it down with a shearing cut, as specified.

Signed by me this 8th day of April, A. D. 1872.

G. WESTERHAUSER.

Witnesses:
GEO. D. WALKER,
GEO. T. PINCKNEY.