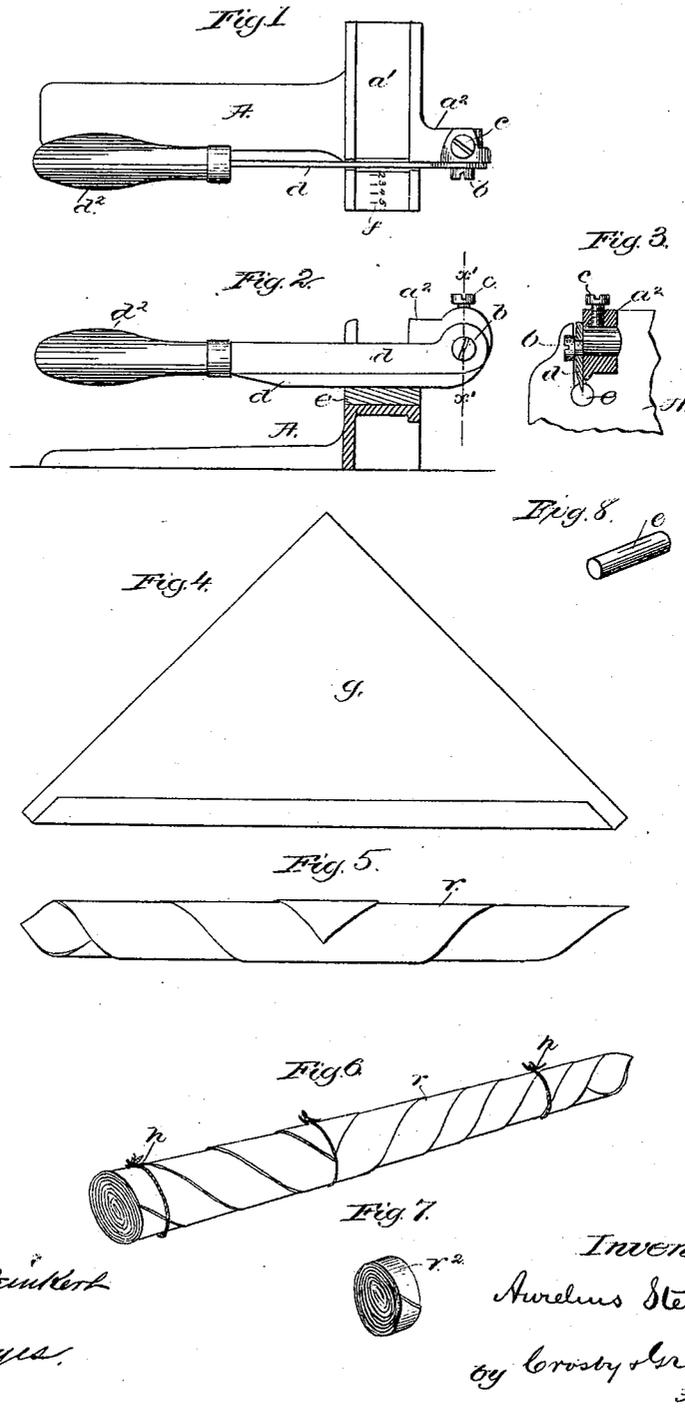


(Model.)

A. STEWARD.
BIAS CUTTER.

No. 251,073.

Patented Dec. 20, 1881.



Witnesses.
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AURELIUS STEWARD, OF BRIDGEPORT, CONNECTICUT.

BIAS-CUTTER.

SPECIFICATION forming part of Letters Patent No. 251,073, dated December 20, 1881.

Application filed November 23, 1880. (Model.)

To all whom it may concern:

Be it known that I, AURELIUS STEWARD, of Bridgeport, Fairfield county, State of Connecticut, have invented an Improvement in Bias-Cutters, of which the following description, in connection with the accompanying drawings, is a specification.

My invention has for its object the production of a cheap, simple, and efficient machine by which to accurately and rapidly cut cloth diagonally into bias strips to be used for braidings, trimmings, &c.

My invention consists, essentially, of a bias-cutter composed of a frame having guides for the rolled material to be cut, and a cutting-blade having its fulcrum on an adjustable eccentric, to enable the blade to be adjusted to compensate for its wear in grinding; also, in a frame to hold and guide the material to be cut and a cutting-blade having its fulcrum on an adjustable eccentric, combined with a cutting-block, against which the edge of the cutter moves, substantially as described; also, in a novel method of forming bias strips for binding and trimming, which consists in first rolling a piece of cloth from one of its corners diagonally across the same at an angle of substantially forty-five degrees to its selvage, to thus form a roll, and then cutting the said roll, at right angles to its length, into pieces of suitable width for binding, as will be hereinafter described.

Figure 1 represents, in top view, a bias-cutter embodying my invention; Fig. 2, a vertical section of the same parallel with the cutting-blade; Fig. 3, a section on the line $x x$, showing the eccentric stud which holds and adjusts the blade; Fig. 4, a piece of cloth partially rolled up in accordance with my invention; Fig. 5, the same fully rolled up; Fig. 6, a perspective view of the roll with one end cut off square; Fig. 7, a roll of binding or trimming cut from the roll of cloth; and Fig. 8 is a view of the cutting-bed removed.

The frame A, of cast-iron or other suitable metal, preferably hollowed out at its under side for sake of lightness, has a channel or guideway, a' , to receive the roll of cloth, r , to be cut into bias strips r^2 , and a lug, a^2 , to receive the eccentric stud b , (shown in section in Fig. 3.) This eccentric stud, which is adjustably held

in the said lug by a screw, c , serves as the fulcrum for the cutting-blade d , shaped substantially as shown, and provided with a handle, d^2 . The eccentric stud b , by its position in the ear a^2 , also serves to keep the blade d pressed so firmly against the face of the lug a^2 that it will not sway, but will rise and fall in the same vertical plane.

The sides of frame A, forming the channel or guideway a' , are slotted at right angles to the guideway for the passage of the cutting-blade d , and just below the said slots the frame is provided with preferably a circular opening for the reception of the cutting block or bed e , preferably of rawhide, and preferably of cylindrical form, so that as it becomes nicked or cut by the blade d it may be partially revolved, thus bringing uppermost a new surface to cooperate with the knife as a cutting-bed. The upper surface of the rawhide bed e is even with the bottom of the channel a' . In the bottom of the channel a' , near the bed e , is stamped a scale or index, as at f , Fig. 1, to measure the width of the bias strip to be cut from the diagonally-wound roll of cloth. The blade, as it is ground to keep it sharp, is gradually reduced in width, and if it had its fulcrum on a plain fixed stud it is obvious that the blade would soon cease to descend sufficiently low at its pivoted end to cut squarely on the bed e . To obviate this evil I contrived the eccentric stud b , which may be turned from time to time, and be secured in such adjusted position by the screw c , thus enabling the edge of the cutting-blade to be lowered to cut squarely throughout its acting length upon the bed e , which is a matter of very considerable importance.

In operation a square, or substantially so, of the fabric g to be cut into bias strips is spread out flat upon a table and rolled from one of its corners diagonally across it at an angle of substantially forty-five degrees to the selvage. The ends of the roll are then tied with string, as at h , and the roll of cloth, which I will designate as r , is placed in the channel or guideway a' , in the path of the cutter or blade d , and the tapered or uneven ends of the roll are cut off squarely, as in Fig. 6, at the left. This done, the roll may be moved forward in the channel or guideway a' , over the gage or

index f , and beyond the path of descent of the blade d for the proper distance, according to the width of the bias strip to be next cut from the roll, and the blade is again forced down 5 through the roll, cutting it off and forming a small narrow roll, r^2 , Fig. 7, which, when unrolled, will present a bias strip of uniform width, suitable for binding or trimming.

I do not broadly claim a box with a blade to 10 cut off material laid therein, nor do I broadly claim a rawhide roller opposed to a cutting-blade, as I am aware that such things are old in straw-cutters.

I claim—

15 1. The frame A, having the channel or guideway a' , combined with the cutting-blade and the adjustable eccentric stud, which serves both as a fulcrum for the said blade and enables it to be adjusted, substantially as described.

2. The frame A, having the channel or guideway a' , and the pivoted cutting-blade, combined with the fixed but adjustable cutting-blade e , held securely in an opening in the frame A, to be acted upon by the cutting-blade as it passes through the material, substantially as 25 described.

3. The improvement in the art or method of producing bias trimming which consists in first rolling a piece of fabric into a roll at an angle of substantially forty-five degrees to its 30 selvage edge, and then cutting the said roll at right angles to its length, all substantially as described.

AURELIUS STEWARD.

Witnesses:

GEORGE H. DIMOND,
ANDREW C. CAMPBELL.