July 31, 1934. M. KATZ ET AL 1,968,688

LOOP CUTTER FOR EMBROIDERED MATERIALS

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Fig. 1.

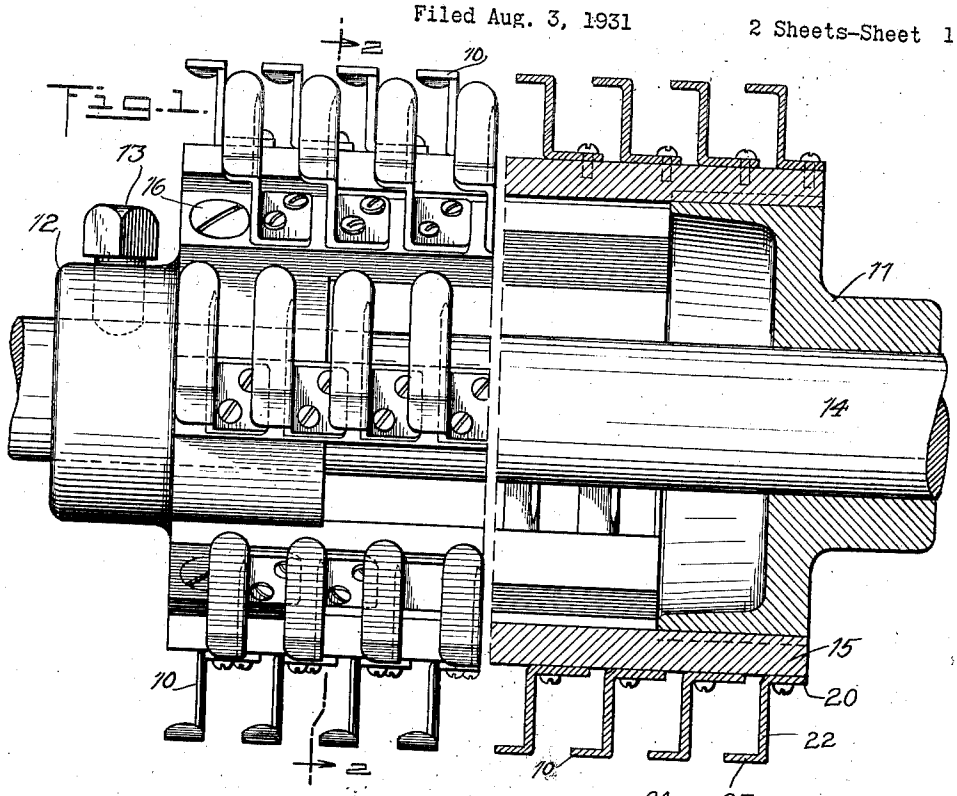
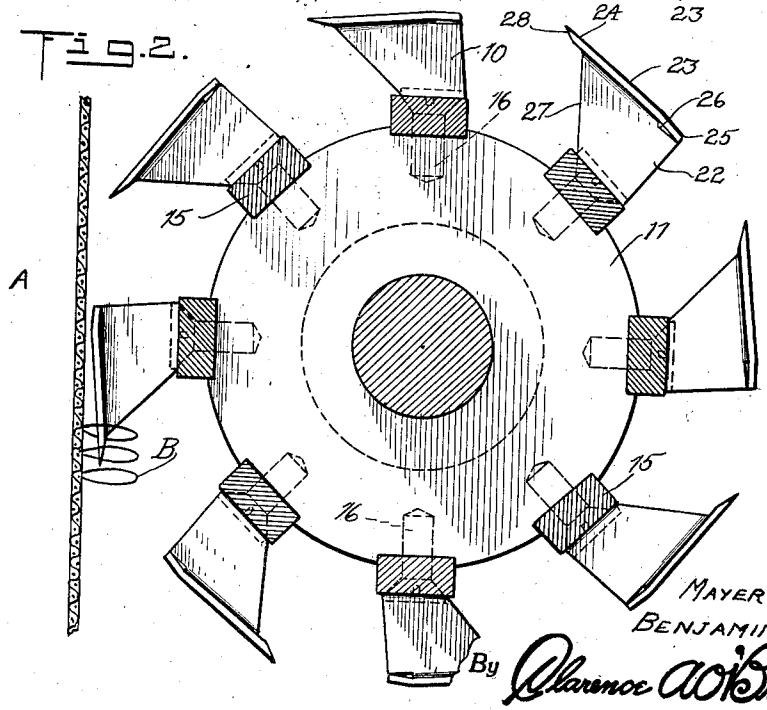


Fig. 2.



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Fig. 3.

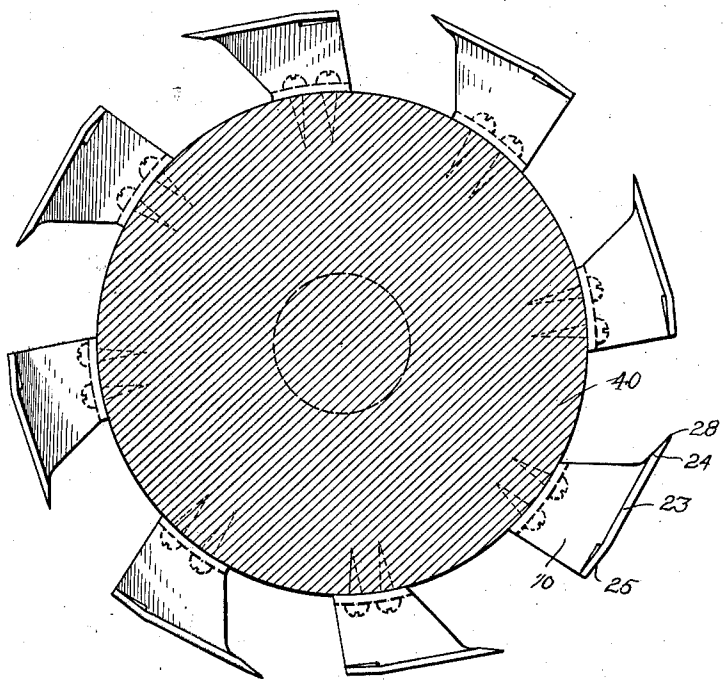


Fig. 4.

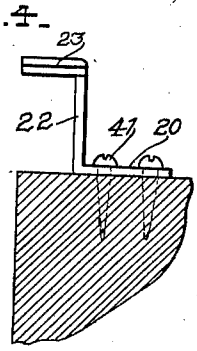


Fig. 5.

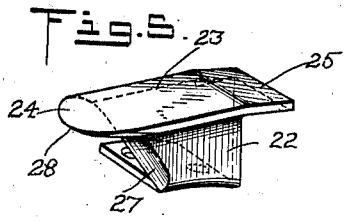
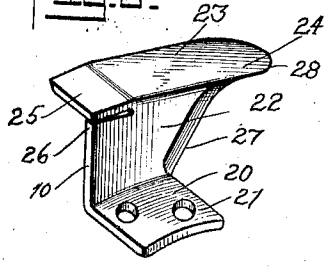


Fig. 6.



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LOOP CUTTER FOR EMBROIDERED MATERIALS

Mayer Katz and Benjamin Koch, West New York, N. J.

Application August 3, 1931, Serial No. 554,881

1 Claim. (Cl. 26—11)

The present invention relates to new and useful improvements in cloth working machines, and more particularly it pertains to devices for cutting the loops of embroidered fabric.

Embroidered fabrics as formed upon embroidery machines, have relatively long loops on the rear face of the fabric and it is desirable to cut these loops and remove the same as a part of the finishing operation of the fabric. Heretofore, this operation has been performed by hand and has been a tedious and time consuming operation.

It is the primary object of the present invention to provide a cutting device which is especially adapted for severing the relatively long loops upon the rear face of an embroidered pattern.

It is a further object of the invention to provide a device of the aforementioned character which is in the nature of a machine operated device thus eliminating all hand labor in connection with the operation.

It is a still further object of the invention so to construct a device of the aforementioned character that it will automatically pick up the loops and sever the same leaving a plurality of free ends upon the rear face of the embroidered fabric to be subsequently removed in a manner common to this trade.

Other objects of the invention will appear as the nature of the invention is better understood, and for this purpose, reference will be had to the accompanying drawings wherein,

Figure 1 is a broken view partly in plan and partly in section showing a device constructed in accordance with one form of the present invention,

Figure 2 is a transverse sectional view taken on the line 2—2 of Figure 1,

Figure 3 is a transverse sectional view illustrating a modified form of the invention,

Figure 4 is a fragmentary view partly in section and partly in elevation,

Figure 5 is a detail perspective view of one of the cutting elements, and;

Figure 6 is a perspective view of one of the cutting elements taken in the direction opposite to the direction in which the view of Figure 5 is taken.

Referring more particularly to the drawings, the device comprises a cylindrical body portion upon the peripheral surface of which is mounted a plurality of individual cutting elements designated 10 in the drawings. In the form of the invention illustrated in Figures 1 and 2, the cylindrical body member is formed by means of two collars 11 and 12 which are secured to a shaft 14 by means of set screws or the like 13 the collars being arranged in spaced relation to each other. Bars such as designated 15 extend from one collar to the other and are secured thereto by means of screws or the like 16. As best illustrated in Figure 2 these bars are arranged in spaced relation to each other and are relatively narrow to provide intervening space between the bars.

The cutting elements 10 heretofore mentioned are carried by the bars 15 and it will be noted by reference to Figure 1 that the cutting elements on each bar are staggered with relation to the cutting element on the next adjacent bars on opposite sides of any one bar. By this construction, the cutting elements overlap each other and as the device is rotated over the fabric, the entire surface of the fabric will be covered and thus assure the engagement of all of the loops to be severed by the various cutting elements.

As best illustrated in Figures 4 to 6, each of the cutting elements comprises a base portion 20 provided with openings 21 for the reception of the screws or fastening means 16 heretofore mentioned. Extending from the base portion 20 there is a body portion 22 and said body portion is positioned in a plane substantially at right angles to the plane of the base portion 20. Carried by the body portion 22 and arranged in a plane at substantially right angles thereto, there is a foot portion 23. This foot portion 23 has a rounded toe portion 24 and a square heel portion 25 which heel portion 25 is slightly offset with respect to the plane of the foot portion 23. The offsetting of the heel portion may be accomplished by kerfing the body portion 22 as indicated at 26 and bending the heel portion downwardly as illustrated in Figure 6.

The body portion 22 is provided on its front edge with a cutting edge 27 and the rounded or toe portion of the foot member 23 is likewise formed with a cutting edge 28.

The device operates in the following manner.

The shaft 14 is driven in any desired manner and the device rotated by said shaft. During rotation the fabric which is designated A in Figure 2 is passed beneath the device and the toe portion 24 picks upon the loops of the fabric designated B and the edges 27 and 28 serve to sever the loops.

Thus it will be apparent that the severing of the embroidery loops on the rear face of the fabric is accomplished in a rapid and efficient man-

ner as distinguished from the slow and laborious hand operation as heretofore performed.

In Figures 3 and 4 there is illustrated a slightly modified form of the invention. In this form of the invention, the cylindrical body member is in the form of a solid cylindrical wooden member 40 and the cutting elements 10 are secured to the peripheral surface thereof by means of screws or the like 41 which have threaded engagement with the wooden body 40.

In this form of the invention, the shaft by which the device is driven may be attached to the body portion 40 in any desired manner.

While the invention has been herein illustrated in two of its preferred forms, it is to be understood that the invention is not to be limited to the specific construction herein shown and that it may be practiced in other forms without departing from the spirit thereof.

Having thus described the invention, what is claimed as new and what it is desired to secure by Letters Patent of the United States, is;

A cutting blade for machines of the type described comprising a base portion, a body portion extending from the base portion and arranged at right angles thereto, said body portion having an inclined forward cutting edge, a foot projecting from said body portion oppositely to said base portion and positioned at right angles to said body portion, comprising a rounded toe portion projecting beyond said cutting edge, and an off-set heel portion.

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