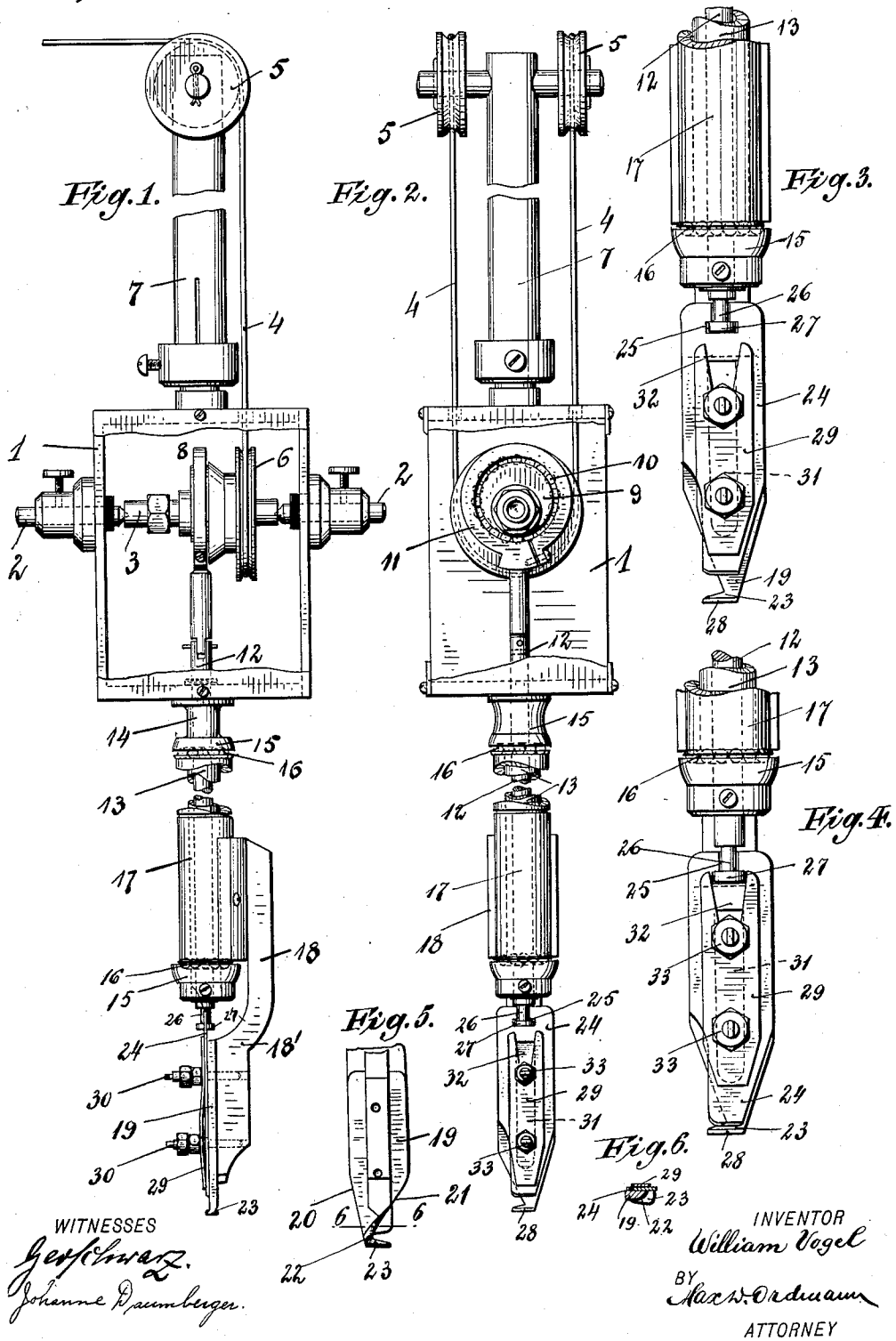


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CUTTING TOOL FOR APPLIQUÉ WORK.

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UNITED STATES PATENT OFFICE.

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CUTTING-TOOL FOR APPLIQUÉ-WORK.

941,967.

Specification of Letters Patent.

Patented Nov. 30, 1909.

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To all whom it may concern:

Be it known that I, WILLIAM VOGEL, a citizen of the United States, and a resident of New York, county and State of New York, have invented certain new and useful Improvements in Cutting-Tools for Appliqué-Work, of which the following is a specification.

This invention relates to a power driven tool for cutting fabric, particularly to power driven means for cutting appliqué work combined with means for causing the cutting means to follow a pattern.

An object of the invention is to combine with suitably arranged power driven cutting means means for preventing the cutting of the bottom ground work of an appliqué fabric and to combine suitable means for directing the progressive movement of the cutting means relatively to the fabric operated upon. In a preferred form the guiding means engages directly against a guiding pattern in the form of stitching extending through the bottom ground work and the appliqué.

Heretofore in cutting out the surplus appliqué fabric upon a bottom ground work, it has been necessary to employ skilled operators who cut out the work by hand operated scissors. This operation was long and tedious, especially on account of the fact that the pattern to be followed in most instances is irregular. Much difficulty also arose due to the fact that extreme care had to be taken to prevent the cutting through of the bottom ground work, as in this art the bottom ground work must be preserved in its entirety and merely the appliqué fabric cut away to provide ornamentation on the bottom ground work.

I am aware that various power driven reciprocating cutting means for cutting fabric are known in the art, but I believe that my invention is the first providing a tool with means for cutting appliqué work having means positively preventing the cutting of the foundation ground work, and means for engaging and following a pattern to guide the progress of the cutting tool.

An embodiment of my invention is shown in the accompanying drawings forming part of this application, in which like numerals designate corresponding parts and of which—

Figure 1 is a front elevation of the complete cutting tool with parts broken away.

Fig. 2 is a side elevation with parts broken away. Fig. 3 is an enlarged detail view showing the cutting blade elevated. Fig. 4 is a similar view to Fig. 3, but showing the cutting blade depressed. Fig. 5 is a rear side elevation in detail showing the guiding means and Fig. 6 is a cross section on line 6—6 of Fig. 5.

Referring now more in detail to the drawings 1 indicates a box like frame to the side walls of which may be suitably secured, as shown, horizontally alined pivot pins 2. Upon the pins 2 is supported the rotatable shaft 3; secured to the shaft 3 is means for reciprocating the cutting blade and is shown specifically in the form of an eccentric 9. The eccentric 9 may be driven in any suitable manner and from any suitable source of power. As shown a pulley 6 is fixed relatively to the eccentric 9 and may be driven by a belt 4 extending from a suitable motor over idlers 5, which may be supported on a cross piece extending from the head 7 projecting upward from the frame 1. It is to be borne in mind also that the pulley 6 may be regarded as designating the source of power and it is located within the frame 1 as shown.

A suitable strap ring 11 is provided for the eccentric 9 and strap ring 11 may be channeled to provide for the reception of ball bearings 10 as shown. The strap ring 11 is linked to the reciprocating stem 12 to operate the cutter. The downward projecting cylindrical socket 13 provides a bearing for the stem 12. The upper end of the member 13 is enlarged into a stub piece 14, which is secured to the lower member of the frame 1 as shown. The lower portion of the stub piece 14 is provided with a flange 15 as shown and a similar flange 15 at the lower end thereof is secured thereto by a suitable collar and set screw. Between the flanges 15 is secured a tubular casing 17 having bearing at its ends against the flanges 15 through the intermediary means of the balls 16. As shown the reciprocating stem 12 extends downwardly and out through the lower end of the bearing member 13 and is provided with a recessed portion and terminal flange 26 and 27 respectively.

Secured to the tubular casing 17 is a downwardly extending arm 18 with an offset portion 18' at its lower end and provided with a vertical member 19 which provides a vertical face alined with the axis of

the reciprocating member 12. The cutting means 24 is adapted to rest flush against the face 19 and have sliding engagement therewith. As shown the cutting means 24 may be in the form of an elongated blade sharpened at its lower end, and provided with a vertical guiding slot 31. The upper end of this blade 24 is dove-tail notched as shown at 25, so as to take over the portions 26 and 27 of the reciprocating member 12 and to be reciprocated thereby. Pins 30 extend outwardly from the offset member 18' and through the guiding slot 31 of the blade 24, while a spring retainer 29 may be clamped against blade 24 by means of nuts 33 engaging the threaded pins 30. The lower portion of the member 19 is cut in as shown and an upwardly directed cutting surface on the part 23 coöperates with the downwardly directed cutting edge of the blade 24. A small horizontal foot 23 is provided and extends horizontally across and below the path of the lower cutting edge formed on the blade 24 and serves as a shield to protect an underlying fabric during the operation of the cutting tool. The edge 28 of the foot 23 extends parallel to the cutting edge of the blade 24 and projects laterally out from the side of its path a slight distance as shown particularly in Fig. 1. This edge 28 forms guiding means for the blade 24 and more specifically a follower for engaging against a stitched pattern to guide the progress of the tool. By means of the bearings 15-16 the sleeve 17 and its downwardly projecting members 18 and 18' may be rotated by the operator to cause the guide 28 and the reciprocating edge accurately to follow any desired pattern.

The operation of this tool will be obvious to those skilled in the art from the foregoing description of its various parts. It might, however, be stated that the depending portion extending from the member 19 is rounded off at 22 and that about this portion the severed material is wedged away from the appliqué fabric secured to the ground work by the stitched pattern.

Although I have illustrated an embodiment of my invention in which the entire mechanism is portable, it is to be understood that for such purpose parts corresponding to the casing 1 etc., may be fixed while the sleeve 17 and the attached parts are provided with a rotating movement relatively to the socket 13 etc. Such an embodiment might be applicable to sewing machines. It is also to be understood that the embodiment of my invention is subject to many modifications obvious to those skilled in the art and is to be considered merely for purposes of illustration.

What I claim and desire to secure by Letters Patent is:

1. In an appliqué cutting tool, a dirigible

reciprocating blade for cutting out portions of appliqué work, a coöperating shearing member for said blade, and guiding means adapted to lie between the foundation ground work and the appliqué work to engage a stitched pattern for guiding the progress of said dirigible blade.

2. In tools for cutting fabric, power driven cutting means for cutting out portions of appliqué work, and means for preventing the cutting of the foundation ground work, said means comprising a foot projecting across and below the path of the cutting edge of said cutting means and arranged to overlie said foundation ground work.

3. In tools for cutting fabric, power driven cutting means for cutting out portions of appliqué work, and means for preventing the cutting of the foundation ground work and providing a guide for engaging a stitched pattern to direct the progressive movement of said cutting means over the appliqué work.

4. In tools for cutting fabric, a reciprocating means for cutting out portions of appliqué work; means for preventing the cutting of the foundation ground work, said means comprising a foot projecting across and below the path of the cutting edge of said cutting means and arranged to overlie said foundation ground work; a power driven shaft for driving said reciprocating cutting means; and a swivel connection between said shaft and said reciprocating cutting means to facilitate the guiding of said cutting means.

5. In an appliqué cutting tool, a power driven reciprocating member; a cutting blade operated thereby and having an up and down movement; a mounting for said blade permitting the free rotation of said blade about the axis of said reciprocating member; an upwardly directed part provided on said mounting for coöperating with the cutting edge of said blade; and a part on said mounting providing a guiding edge for following a pattern to direct the progress of the cutting blade relatively to the fabric.

6. In an appliqué cutting tool, a power driven reciprocating member; a cutting blade operated thereby and having an up and down movement; a mounting for said blade permitting the free rotation of said blade about the axis of said reciprocating member; an upwardly directed part provided on said mounting for coöperating with the cutting edge of said blade; and a foot secured to said mounting and arranged to underlie the cutting edge of said blade to protect the underlying ground work, to lift up the appliqué fabric to be cut, and providing a guiding side edge for engaging and following a pattern stitching.

7. In an improved tool for cutting fabric or the like, the combination with a motor, a

shaft driven by the latter, an eccentric mounted on said shaft and consisting of an eccentric disk, a ring surrounding the latter and ball-bearing between said disk and ring, a rod connected with said eccentric, a blade rotatively suspended from said rod, a tubing mounted on said rod, ball-bearings for guiding said tubing on the latter, a guide secured to said tubing, and formed at its lower end with a shoe having a cutting edge cooperating with said blade, said blade being slidably and yieldingly connected with said guide, substantially as and for the purpose specified.

8. In an improved tool for cutting fabric or the like, the combination with a motor, a frame, a revoluble shaft transversely supported therein and driven by said motor, an eccentric mounted on said shaft, a rod connected with said eccentric, a blade rotatively suspended from said rod, a tubing mounted on said rod, ball-bearings for guiding said tubing on the latter, a guide secured to said tubing, and formed at its lower end with a shoe having a cutting edge cooperating with said blade, said blade being slidably and yieldingly connected with said guide, substantially as and for the purpose specified.

9. The improved tool for cutting fabric or the like, comprising a reciprocating rod, the lower end of which is formed with a cylindrical neck and collar, a blade having at its upper end a notch in shape of a reversed T to rotatively engage said neck and collar of the rod, a tubing mounted on said rod, ball-

bearings for guiding said tubing on the latter, a guide secured to said tubing and formed at its lower end with a shoe having a cutting edge cooperating with said blade, said blade being slidably and yieldingly connected with said guide, substantially as and for the purpose specified.

10. The improved tool for cutting fabric or the like, comprising a reciprocating rod, the lower end of which is formed with a cylindrical neck and collar, a blade having at its upper end a notch in shape of a reversed T to rotatively engage said neck and collar of the rod, a cylindrical socket surrounding said rod, a tubing mounted on said socket, ball-bearing for guiding said tubing on the latter, a guide secured to said tubing and formed at its lower end with a shoe having a cutting edge cooperating with said blade, said blade being slidably and yieldingly connected with said guide, substantially as and for the purpose specified.

11. In an appliqué cutting tool, a reciprocating blade for cutting out portions of appliqué work, a cooperating shearing member for said blade, and means adapted to lie between the foundation ground work and the appliqué work to engage a pattern for guiding the progress of the blade.

Signed at New York this 24 day of May, 1907.

WILLIAM VOGEL.

Witnesses:

JOSEPH E. CAVANAUGH,
MAX D. ORDMANN.