L. MUTHER.

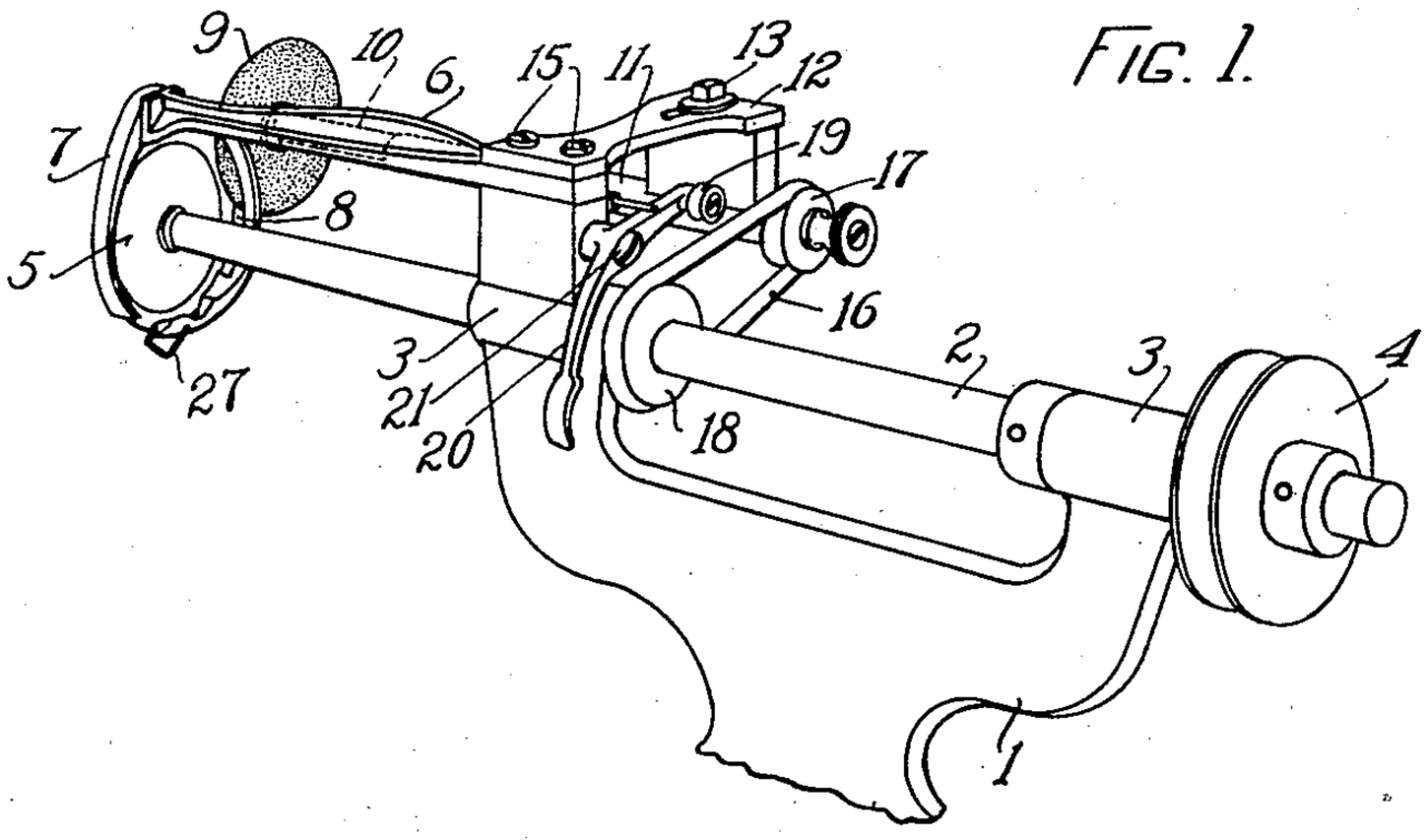
ROTARY TRIMMING MACHINE.

APPLICATION FILED MAY 11, 1908.

954,578.

Patented Apr. 12, 1910.

FIG. 1.



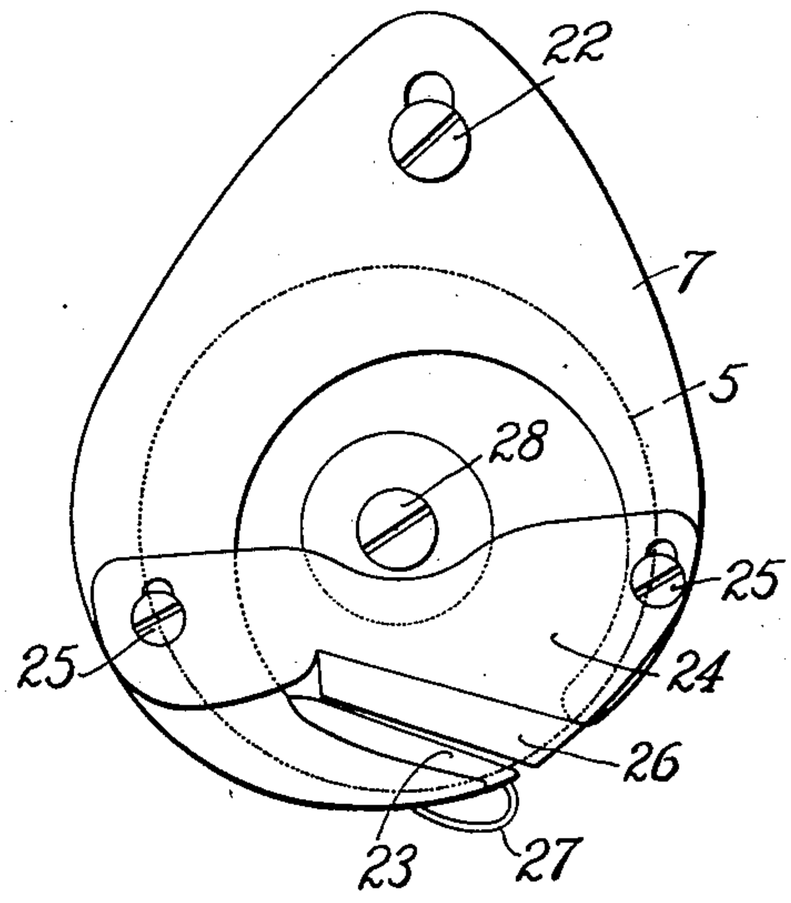


FIG. 2.

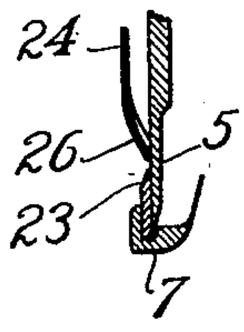


FIG. 4.

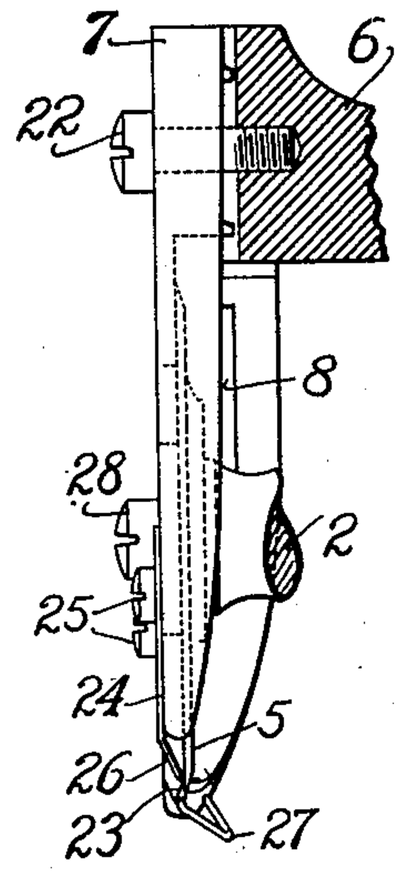


FIG. 3.

WITNESSES

A. T. Palmer

H. W. Kelso.

INVENTOR

Lorenz Muther.

J. Richard C. Elliott,

Attorney.

UNITED STATES PATENT OFFICE.

LORENZ MUTHER, OF BOSTON, MASSACHUSETTS.

ROTARY TRIMMING-MACHINE.

954,578. Specification of Letters Patent. **Patented Apr. 12, 1910.**

Application filed May 11, 1908. Serial No. 432,138.

To all whom it may concern:

Be it known that I, LORENZ MUTHER, a citizen of the United States, residing in Boston, county of Suffolk, Commonwealth of Massachusetts, have invented certain new and useful Improvements in Rotary Trimming-Machines, of which the following is a specification, reference being had to the drawings accompanying the same and forming a part thereof.

My invention relates to a machine for cutting the gore piece from the linings of Congress shoes on the line of and near the gore seam, or for cutting out the cloth, under lace insertions close to the seam thereof, and for similar work.

The objects of my invention are to provide a guard for the rotary cutting knife to protect the operator from being injured; to provide a gage and guard for the work which will permit the cloth to be cut or trimmed close to the seam, and yet effectually prevent the injury of the lace insertion or the cutting of the stitches by which it is sewed to the cloth; and further to provide a smooth rounded separator or guide to be inserted between the lace and the cloth to be cut which will not catch in the meshes of the lace or in the cloth.

In the drawings accompanying this specification—Figure 1 is a perspective elevation of my improved rotary trimming machine; Fig. 2 is an end elevation of the cutter and guard, the work guide or gage, and the separator; Fig. 3 is an edge view of Fig. 1 showing the parts of the machine in section; and Fig. 4 is a partial sectional edge elevation of the rotary cutter, guard, cloth gage and guide.

In the drawings, 1 represents the base and frame of the rotary cutting machine; 2 the shaft on which the rotary cutter is mounted; and 3, 3, the bearings in which the shaft is rotatively mounted; 4 is a pulley mounted on the outer end of the shaft and serves, through the medium of a belt, to rotate the same; 5 is a rotary disk cutter which is mounted on the end of the shaft and held in place by the screw 28.

6 is an arm attached to one of the bearings 3, extending outwardly in line with the cutting knife and has adjustably secured to its outer end the guard 7, by means of the screw 22; 8 is a slot in the back of the guard through which an abrasive wheel may project and which is designed to sharpen the edge of the cutter.

9 is an abrasive wheel which is mounted on the end of the rotating shaft 10, the shaft 10 being mounted in the bearing 11 which is attached to a supporting bracket 12 by a screw 13 in such manner as to be adjustable thereon and to swing as on a pivot. The support 12 is attached to one of the bearings 3 of the frame by means of the screws 15, 15. The shaft 10 is rotated by means of the belt 16 which is mounted on the pulleys 17, 18, and this belt is designed to be loose so that the shaft 10 will be normally at rest when the shaft 2 is rotated. If it is desired to rotate the shaft 10, the binding pulley 19 is brought down upon the belt 16 by means of the lever 20. The lever 20 is pivoted on the screw 21 and is partially rotated thereon when it is desired to tighten the belt 16.

The guard 7 is mounted on the end of the bracket 6 in manner to be adjusted vertically as well as rotatively by the adjusting screw 22. The purpose of this adjustment is to enable the guard 7 to be moved upwardly as fast as the cutting disk 5 is worn down in use, so that the cutting edge of the cutting disk will always be brought in proper adjustment with reference to the work guides 23 and 24. These work guides serve to guide the lace insertion and cloth or the gore piece of a shoe when being cut, and to prevent any liability of the seam which binds the two together from being cut or injured by the edge of the cutting knife. The guard portion 26 of the guide 24 is bent inwardly as shown in Figs. 3 and 4 so that its lower edge lies very close to the face of the rotary cutting knife to permit the seam to come very close to the cutting edge of the knife 5, but not so close as to injure or cut the stitches. The guide 24 is adjustably secured to the guard 7 by the two binding screws 25, 25, which are threaded into the guard 7 and pass through slots in the guide and guard 24.

27 represents what might be termed a separator and guide. The purpose of this separator is to provide means to be inserted between the lace insertion and the cloth to which it is attached to separate the two as they are run to the cutting knife, the cloth of course lying on the top of the guide or separator 27 and carried by it to the edge

of the cutting knife while the lace insertion passes under. This separator or guide 27 is preferably made of wire and bent with rounded edge presented forward so that it will not catch in the meshes of the lace or in the fabric to which it is attached.

The form of the frame of the machine, of the guard, work guide, cloth guide or separator, and method of attaching the abrasive sharpening wheel, may be varied somewhat without departing from the spirit of my invention.

What I claim is—

1. In a rotary trimming machine, a rotary cutting knife; a guard adjustably secured to a support and inclosing the rotary cutting knife; a guide adjustably mounted on said guard to position the material to be cut and prevent injury to it.

2. In a rotary trimming machine, a rotary cutting knife; a guard for said knife inclosing same and adjustably mounted on the frame of said machine; a guide adjustably mounted on said guard to position the material to be cut; and a guide to separate the layers of material.

3. The combination in a rotary cutting machine, of a rotary cutting knife and means for rotating same; an adjustable guard surrounding said cutting knife; a gage adjustably mounted on said guard; and a guide mounted on said guard.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses, this the 26th day of April, A. D. 1908.

LORENZ MUTHER.

Witnesses:

R. P. ELLIOTT,

A. H. SPENCER.