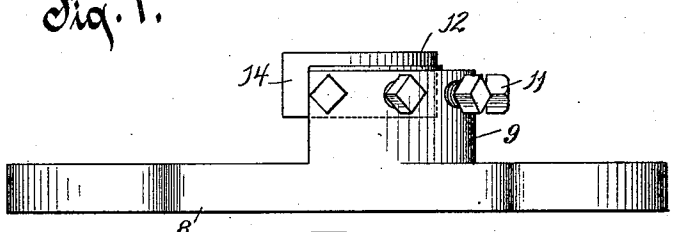
(No Model.)

W. KOOTZ.

MACHINE FOR CUTTING LEATHER STRINGS.

No. 562,000. Patented June 16, 1896.

Fig. 1.



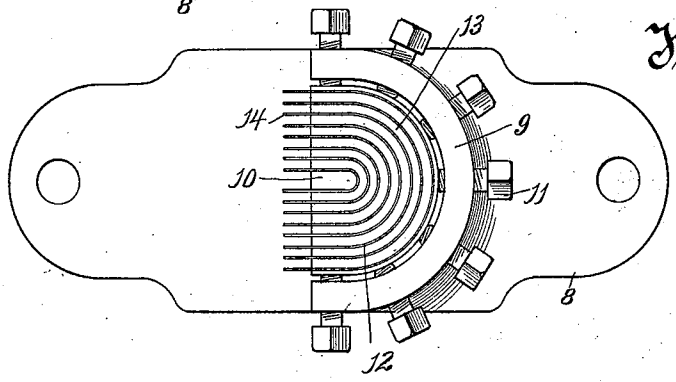


Fig. 2.

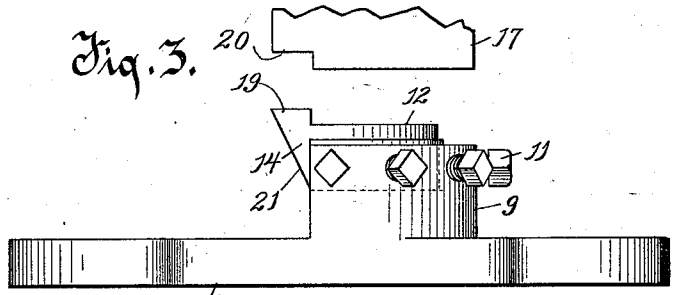
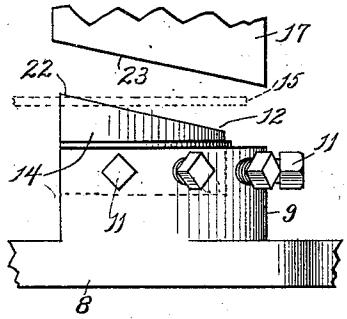


Fig. 3.

Fig. 4.



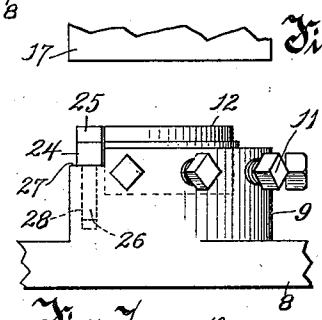


Fig. 5.

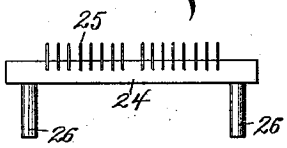


Fig. 6.

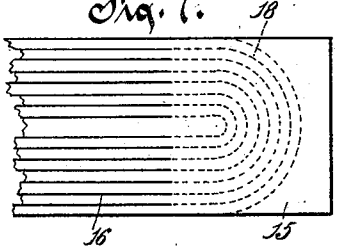


Fig. 7.

Witnesses.

D. N. Feeney

Anna V. Faust

Inventor.

William Kootz.

By Benedict & Morsell

Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM KOOTZ, OF MILWAUKEE, WISCONSIN.

MACHINE FOR CUTTING LEATHER STRINGS.

SPECIFICATION forming part of Letters Patent No. 562,000, dated June 16, 1896.

Application filed March 16, 1896. Serial No. 583,285. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM KOOTZ, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Machines for Cutting Leather Strings, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has relation to improvements in machines for cutting leather strings.

The invention is of particular utility where continuous strips or strings are formed from short lengths of leather, said strips or strings being of substantially twice the length of the piece of leather from which they are cut.

The object is to provide guiding mechanism whereby slits already formed in the leather are guided to the cutting-knives and the slits thereby continued in an accurately true line.

With the above primary object in view the invention consists of the devices and parts or their equivalents, as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is an elevation of one form of my invention, showing the plunger of an ordinary press above the same and in position to strike. Fig. 2 is a plan view of Fig. 1, the plunger being omitted. Figs. 3, 4, and 5 are elevations of different forms of the device. Fig. 6 is a detail view of the cutting-teeth and their base or the "comb" employed in the form of device illustrated in Fig. 5; and Fig. 7 is a view of a length of waste stock, showing in full lines the slits made in the stock prior to being acted upon by my invention, and in dotted lines showing how said slits are continued by my improved machine in order to provide continuous strips or strings.

Referring to the drawings, the numeral 8 indicates the base in the several forms of the machine. From this base rises upwardly a substantially U-shaped flange 9. The base is also provided with holes through which bolts may be inserted for attaching the base to the bed-plate of an ordinary press. Filling the greater portion of the recess formed by the flange 9 is a plate or block 10. This part is advisably not an integral block, but may be composed of a series of sections held together within the recess by means of the screws 11, passing radially through the flange.

Referring now particularly to the construction shown in Figs. 1 and 2, the numeral 12 indicates a series of concentric U-shaped cutting-knives, which are secured to the plate or block 10, and extend upwardly therefrom. Where this plate or block is composed of a series of separate sections, these knives are clamped in between adjacent sections. The knives are arranged equidistant apart, and of course the distance from one side to the other of each successive inner knife is less than the distance from one side to the other of the preceding knife. This arrangement provides a series of concentric spaces 13. The ends of the several knives project a desired distance beyond the edge of the plate or block to form a series of guiding-fingers 14, which, together with the equivalent fingers in the other forms of construction, I will, for the sake of convenience, designate throughout as a "guiding-comb." In the practical working of this form of my invention a piece of leather, as 15, of such shortness as to ordinarily constitute waste stock, is first slitted by any approved method to form the straight slits 16. (Indicated in full lines, Fig. 7.) Now if these slits were continued straight to the end of this short piece of leather, strips or strings of leather would be formed of insufficient length for the purpose for which said strings are ordinarily used. Therefore, in order to secure a continuous length of string of almost double the length of the leather from which it is cut, I employ my invention. The slits 16 are first made to engage the projecting guiding fingers or comb 14, the fingers projecting through said slits. As the fingers of the comb are in direct longitudinal alinement with the cutting-knives it is apparent that the leather is so held as to continue the cuts straight from the slits already made. Force is now applied so as to depress the plunger-head 17. The blow of the head on the leather will of course force said leather in contact with the cutting edges of the knives, and as the plunger is pressed home the leather is forced down into the spaces 13, whereby the concentric circular slits 18 (indicated by dotted lines in Fig. 7) are made directly in line

with the previous straight slits 16, thus forming a series of continuous strips or strings of leather of almost double the length of the piece of leather from which they were cut.

In the form of construction illustrated in Fig. 3 of the drawings the projecting guiding-fingers of the comb extend upwardly, as indicated at 19, above the plane of the upper edges of the knives 12. The plunger-head of course is provided with a cut-away portion or recess 20 to adapt it to receive the upwardly-projecting extensions 19 on the down movement of said plunger. If desired, the outer edges of these fingers 14, Fig. 3, may be beveled downwardly, as shown at 21.

In the form illustrated in Fig. 4 the ends of the several knives project a desired distance beyond the edge of the plate or block, the same as in Figs. 1 and 2, in order to form the comb. The upper edges of the knives, however, are on a gradual incline from their centers toward their outer ends, so that the highest points of said knives are at their outer extremities, as indicated by the numeral 22. To conform to the shape of the upper edge of the knives, the under side of the plunger 17 is beveled off or inclined, as indicated by 23. As shown by the dotted lines in Fig. 4, the slits in the leather are placed over the points 22. It is obvious that the blow of the plunger-head will cause the complete slitting of the leather, the same as in the other forms of construction.

Figs. 5 and 6 show another form in which the comb is made removable, said comb consisting of a base-piece 24 and the upwardly-projecting fingers 25. The base-piece is also provided with depending fingers 26 26. In this form the ends of the flange 9 are provided with shoulders 27, on which the ends of the base-piece rest, said shoulders also provided with downwardly-extending recesses 28 to receive the pins 26.

The above description includes several different forms for carrying out my invention. The novel feature of the invention, however, is the provision of the guiding-fingers formed or provided at the outer ends of the knives, whereby the slitted leather is accurately guided to the cutting-knives.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with a series of cutting-knives, of guiding-fingers formed or provided at the outer ends of said knives, and in longitudinal alinement therewith, said guiding-fingers adapted to engage a slitted leather strip, and to guide the slits of said strip to the cutting-knives, to effect a straight continuation of the slits, when pressure is applied against the leather.

2. A comb adapted to be applied to the outer ends of cutting-knives, said comb consisting of a base-piece, and guiding-fingers extending from one side thereof.

3. A comb adapted to be applied to the outer ends of cutting-knives, said comb consisting of a base-piece, guiding-fingers extending from one side thereof, and pins projecting from the opposite side thereof.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM KOOTZ.

Witnesses:
A. L. MORSELL,
ANNA V. FAUST.