May 24, 1938. N. G. TUCKER 2,118,278

HAT LEATHER FITTING MACHINE

Filed Oct. 8, 1937

Fig. 1

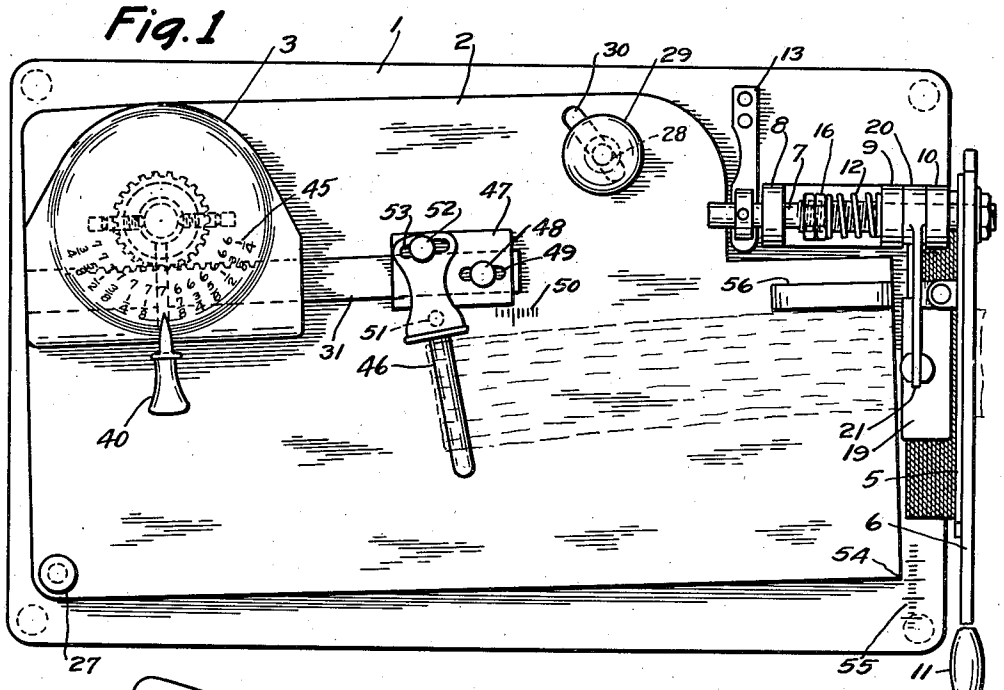


Fig. 2

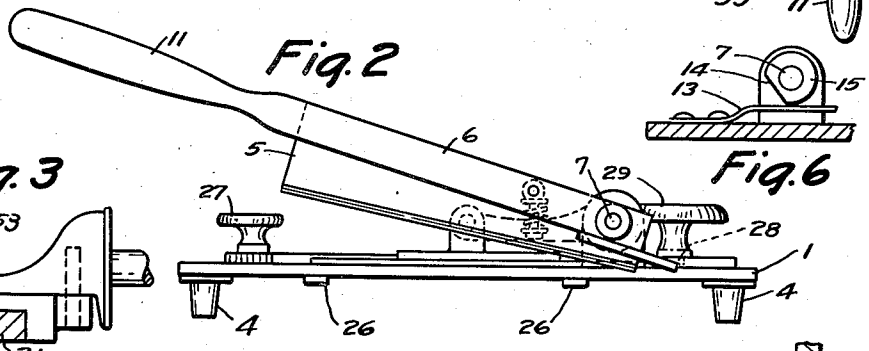


Fig. 3

Fig. 6

Fig. 4

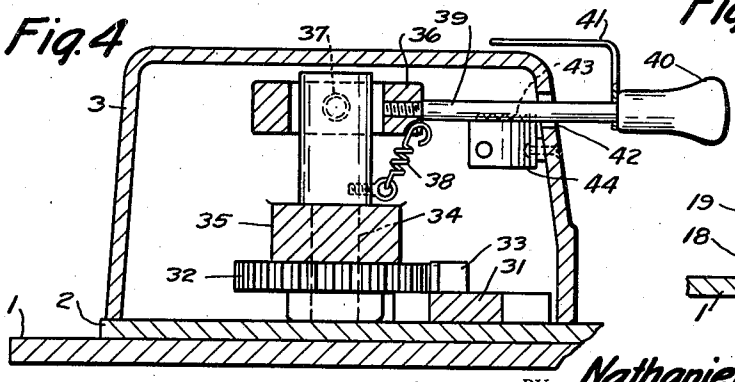
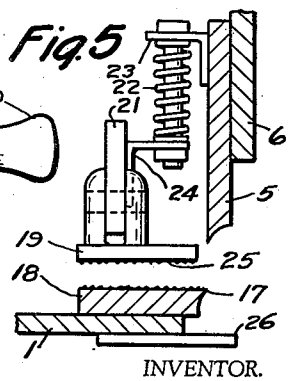


Fig. 5



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HAT LEATHER FITTING MACHINE

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4 Claims. (Cl. 223—22)

The purpose of this invention is to provide improvements in fitting machines for the inside leather hat bands, in which the ends of the band are cut with a shearing action, positively held directly at the shear, and also in which the angle of the band in relation to the shear may readily be adjusted, and the length thereof may also be readily adjusted.

The invention is a machine having a base with a shear at one end, and an adjustable pin mounted upon a pivoted plate upon which hat leathers may be placed, and means is provided for adjusting the pin to intermediate sizes, and also for adjusting the angle of the plate upon which it is mounted, and means is also provided for clamping the leather against the base directly at the shear.

Other devices of this nature have been provided, in which the leathers are held and cut in a somewhat similar manner, however, it has been found very essential to provide mechanical means for automatically clamping the ends of the leather against the base in order to obtain a clean cut, also to provide means for readily adjusting the length of the band to sizes and eighth sizes, and also to adjust to intermediate positions between the eighth sizes. It has also been found necessary to independently adjust the angle of the pin upon which the leather is held, and also readily adjust the position of the leather in relation to the knife to change the angle of the cut to insure a smooth, neat fit in the hat.

The object of this invention is, therefore, to provide improvements in hat leather fitting machines facilitating the means for adjusting the length of the hat leathers, and also the angle of the cut.

Another object is to provide mechanical means for readily clamping and holding the leather at the knife, eliminating the necessity of holding it by hand, and thereby eliminating the possibility of cutting off the ends of the fingers.

Another object is to provide means for setting the angle of the ends of the leather by graduations on the machine.

Another object is to provide means for adjusting the length of the band to different degrees in relation to the eighth sizes, as one hat manufacturer may desire a band for a size 7 hat slightly larger or smaller than another.

A further object is to provide means for setting the size of the leather so that the length thereof may readily be set by a common knob with an indicator in combination.

And a still further object is to provide a hat leather fitting machine which is of a simple and economical construction.

With these ends in view the invention embodies a base plate, a movable plate pivotally mounted on said base plate, a knife forming a shear pivotally mounted on the end of said base plate, a clamp in combination with said knife for clamping the ends of hat leathers against the base as the knife is operated, a pin upon which the hat leather is held, a slide upon which said pin is mounted, and a knob geared to said slide for readily moving the slide to set the pin.

Other features and advantages of the invention will appear from the following description taken in connection with the drawing, wherein:

Figure 1 is a plan view of the machine.

Figure 2 is an end elevation looking toward the knife.

Figure 3 is a detail showing the mounting of the pin upon which the leather is held.

Figure 4 is a cross section through the head which adjusts the machine to different sizes.

Figure 5 is a detail showing the shearing or cutting edges.

Figure 6 is a detail showing the collar and spring for frictionally holding the knife.

In the drawing the machine is shown as it may be made, wherein numeral 1 indicates the base, numeral 2, the sliding plate, and numeral 3, the head.

The base 1 is preferably formed of a flat piece of material with legs 4 at the corners, and it will be noted that the entire machine and operating parts are mounted on this base. The knife 5, for cutting the ends of the leathers, is mounted at the end of the machine, with the blade attached to a lever 6 pivotally mounted on a shaft 7 and held in bearings 8, 9, and 10. The lever 6 is provided with a handle 11 by which it may be raised and lowered, and this is frictionally held by a spring 12, and also by a spring 13 that engages a flat side 14 of a collar 15 on the end of a shaft 7. The tension of the spring 12 may be adjusted by lock nuts 16 so that the knife may be held in any position. The knife blade 5 engages a cutting edge 17 of a shear plate 18 on the base 1, and it will be noted that the cutting edges of both the knife and plate are hollow or concave, as shown in Figure 5.

The machine is also provided with a clamp for holding the ends of the leathers as they are cut, as it will be noted that, when these are held by hand, the end on the lower side slips slightly backward, so that both are not cut exactly the same, and, therefore, a plate 19 is provided which is pivotally mounted through a hub 20 on the shaft 7 through an arm 21, and this is resiliently held downward as the knife is moved downward by a spring 22 located between a clip 23 on the knife and a clip 24 on the arm 21, and it will be noted, that as the knife is raised, it will raise the plate 19 to the position shown in Figure 5, or as far as desired, and, after the ends of the leather have been placed in the cutting position, the knife is moved downward, and, as it is started, it will first move the plate 19 downward upon the ends

of the leather, and positively grip the ends before the knife starts to cut. The under surface of the plate 19 is knurled, as shown at the point 25 in Figure 5, and the upper surface of the plate 18 is also knurled at 17 to insure positive and absolute gripping and holding of both ends of the leather. This holds the ends positively in the correct position so that they may be cut true and even. The lower side of the base 1 may be provided with extensions 26, which extend outward adapted to be engaged by the knife to limit the downward movement thereof. It will be understood, however, that the knife and the mounting thereof may be changed as may be desired.

The plate 2 is slidable upon the base 1, and this is pivotally attached to the base by the stud 27, and adapted to be held at substantially any angle by a screw 28 having a knob 29 by which it may readily be screwed downward to clamp the plate 2 against the base 1 through a slot 30 on a radius from the stud 27.

The head 3 is fixedly attached to the plate 2, and this is formed with a bar 31 extending outward from one side thereof, and the bar is operated by a gear 32 and a rack 33, the rack being fixedly mounted on the bar 31, and the gear being fixedly mounted on a vertical shaft 34. The shaft 34 is pivotally mounted in a cross bar 35 of the head 3, and on the upper end thereof is a collar 36 pivotally held by set screws 37, and resiliently held downward by a spring 38, and extending from one side of the collar 36 is a rod 39 having a knob 40 thereon, with an index pointer 41 extending upward and partially over the upper surface of the head 3. The rod 39 extends through a slot 42 in the face of the head, and this engages or falls into notches 43 in an inner plate 44 to locate it in different positions. These notches correspond with sizes, as indicated by the figures 45 on the upper surface of the head, and it will be noted that the pointer 41 may be readily set to the size seven, or any fraction thereof, or to the different divisions of the size six, and, as this knob is moved, it rotates the gear 32, and this gear through the rack 33 moves the bar 31 backward and forward to adjust the position of the pin 46 mounted thereon.

A further adjustment is provided as the pin 46 is mounted on a block 47 slidably mounted on the bar 31, and this is held by a thumb screw 48 in a slot 49 so that the block 47 may be adjusted to the graduations 50 in order to set the pin to the exact position for obtaining the correct length of the leather for any size, as one manufacturer may desire a slightly longer or shorter leather for the size seven, and another may desire the leather of a different dimension, therefore, the exact length of the leather may be adjusted to correspond to variations of different manufacturers of the same size.

The pin 46 is also adjustably mounted on the block 47, and is pivotally mounted on a pin 51 and adapted to be clamped in substantially any position by a thumb screw 52 extending through a slot 53 and threaded into the block 47. This makes it possible to adjust the position of the pin 46 to correspond with the shape of the leather, and then adjust the position of the leather in relation to the knife, or to obtain any desired bevel at the cut by adjusting the plate 2 with the knob 29. The corner 54 of the plate 2 is positioned to register with graduations 55 on the base 1, so that this plate may be set to a standard slant or angle. This plate is provided with a block 56 against which the edge of the leather may rest while positioning the leather thereon.

It will be understood that other changes may be made in the construction without departing from the spirit of the invention. One of which changes may be in the use of other means for clamping the plate 2 upon the base 1, another may be in the use of other means for adjustably positioning the leather in relation to the knife, and still another may be in the use of other means for clamping the leather as it is cut.

The construction will be readily understood from the foregoing description. In use the device may be provided as shown and described, and it will be noted that the point 54 of the plate 2 may be set to a manufacturer's standard, and the pin 46 may be adjusted to give the correct scope of the leather, so that it may be held throughout the length of the pin with the edge of the leather engaging the block 56, and, with these parts set, the leather may be placed in the machine, and then, as the knife is moved downward, it will be automatically clamped by the plate 19 before it is cut. The parts may also be adjusted to compensate for different sizes and it will be noted that, by placing the knob 40 on the upper surface of the plate 2, and locating it at the left hand end, the length of the leather may readily be adjusted, and, in fact, by locating all of the adjusting parts right in front of the operator, these parts may readily be set to obtain the most perfect cut, thereby expediting the operation of the machine.

Having thus fully described the invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a hat leather fitting machine of the type having a common knife for cutting both ends of the leather with one action with the leather bent at its midway point, and a pin around which the leather is bent; characterized in that all of the parts are mounted on two plates, one forming a base and the other slidable thereon, and with the knife mounted on the base and the pin on the slidable plate; a head on said slidable plate for controlling the position of said pin to regulate the size of the leather, and a knob with a pointer thereon pivotally mounted in said head suitably connected to said pin for moving the pin with the pointer for adjusting the same, said head having figures on the surface thereof indicating sizes positioned in the path of said pointer.

2. A machine as described in claim 1, further characterized by means adjusting the position of the pin in relation to the pointer.

3. In a machine as described in claim 1, a bar slidable on the slidable plate and extending into the head, a block in which the pin is mounted slidable on said bar, a gear rack on said bar, and a gear fixedly attached to said knob and rotated thereby, said gear meshing with said rack.

4. In a hat leather fitting machine of the type in which the leather is bent midway thereof, a pin around which the leather is bent, means for adjusting the position of the pin for different sizes of leathers, a slidable block, and means pivotally mounting said pin in said block, providing means for adjusting the angle thereof.

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