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APPARATUS FOR FASTENING INNER
LININGS

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6 Claims. (Cl. 112—20)

This invention relates generally to apparatus for mounting material such as a fabric inner lining upon the inner surface of materials such as leather or the like.

5 More specifically, my invention contemplates improved means whereby fabric linings may be applied to the inner surface of skins, for example, skins used for fur coats and other similar wearing apparel.

10 Heretofore it has been common practice in sewing inner linings to skins to employ complicated and expensively constructed special machinery, and it is one of the objects of the present invention to provide apparatus of very simple and
15 inexpensive design, which will greatly expedite the speed and accuracy with which a lining can be applied.

My invention contemplates the use, in combination with elements of a well known, economically constructed sewing machine, of an attachment which renders said conventional sewing
20 machine operable for sewing inner linings to a leather coating or skin.

A further object of the invention is to enable
25 the application of a lining to a fur piece, as above set forth, without subjecting said fur piece to the slightest degree of wrinkling.

Still more specifically, my invention contemplates apparatus whereby the inner and outer
30 pieces of material may be folded so as to present an edge, through which stitches may be passed by a needle without piercing through the outer piece, and at the same time securely fastening the pieces in proper juxtaposition.

35 The invention contemplates the use of an elongated member or bar having an edge portion, over which the pieces may be folded so as to present an edge at the top of the bar, through which the thread may be passed by a conventional reciprocating needle, rollers serving to clamp the
40 pieces tightly together immediately adjacent the area where the needle enters the piece.

The foregoing and numerous other objects and advantages will be more readily apparent from
45 the following detailed description when considered in connection with the accompanying drawing, wherein:

Figure 1 is a plan, fragmentary view of a machine which is representative of one embodiment
50 of my invention, and whereby the securing of inner linings to skins and the like may be very efficiently practiced;

Figure 2 is an enlarged perspective view of the bar attachment over which the pieces of material to be joined may be folded, and which serves
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to support said material as it is fed between the rollers;

Figure 3 is an enlarged, fragmentary plan view of the supporting bar structure and feeding rollers, pieces of material being shown in position
5 upon the bar structure;

Figure 4 is an enlarged transverse sectional view taken substantially along the line 4—4 of Figure 3; and

Figure 5 is a fragmentary section of the joined
10 pieces showing the manner in which the stitch is taken to secure said pieces together.

Referring now to the drawing wherein like numerals have been employed to designate similar parts throughout the various figures, it will be
15 noted that my invention contemplates a machine which includes a bed or base 10 (Figure 1), upon which is mounted a sewing machine or mechanism designated generally by the numeral 12.

The mechanism 12 may be of any suitable conventional design, and for the purpose of disclosing one practical application of my invention I have shown a mechanism or sewing machine which includes a pair of cooperative material
20 feeding rollers 14. These rollers are mechanically coupled with and driven from a suitable drive shaft 16, upon which is mounted a belt driven pulley 18. Peripheral portions of the rollers 14 are adjacently positioned, as clearly shown in Figures 1 and 3, and by means of serrations
25 or teeth 20, said rollers are adapted to tightly impinge upon and grip the work, which I have designated generally by the numeral 22 (Figures 3, 4 and 5). Thus, when the rollers 14 rotate in the direction indicated by the arrows in
30 Figure 3, the work 22 is moved to the left across the path of a reciprocating needle 24.

The needle 24 is driven through the agency of mechanism (not shown) which is coupled with the drive shaft 16. Inasmuch as the rollers 14,
35 needle 24, and the mechanism for actuating said parts are well known in the art, it is not deemed necessary for a clear understanding of the present invention, to describe and disclose in detail such well known mechanisms. It will suffice to
40 state that when power is applied to the shaft 16, either by a belt 26 or through the manual manipulation of a handle wheel 28, rotation will be imparted to the feeding rollers 14, and reciprocation will be experienced by the needle 24
45 mounted upon a suitable shiftable arm 30.

Attention is now directed to a bar structure 32, which includes end bar members 34 joined by a pair of intermediate side bar members 36,
50 said side bars being secured to the end bars by
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suitable fastening means or screws 38 (Figure 2). A series of rotary guiding discs 40 are supported within the space presented between the side bars or plates 36. The uppermost peripheral portions of the discs 40 are substantially coincident with the extension of the upper edges of the bars 34. The structure 32 is supported in any suitable manner upon the bed 10 as by means of upright members 42 (Figure 1).

10 The bar or rod structure 32 serves as means for supporting the work 22 in proper position to be acted upon by the needle 24. The work 22, as disclosed in the drawing, comprises a fur section made up of the skin proper 44 and the fur proper 46. Overlying the skin or leather 44 is a piece of inner lining material 48, such as fabric or the like. The two pieces are folded over the bar structure 32 along the line where it is desired to sew the pieces together. It will be noted 20 in Figure 4 that when the work 22, folded over the bar structure, is fed between the rollers 14, the pieces 44 and 48 will extend above the upper surfaces of the rollers just sufficiently to permit the needle 24 to pass through the skin 44 without causing any piercing of the furred surface of said skin. In other words, the needle 24 carries a thread 50 through two sections or walls of the inner lining 48 and only through one section or wall of the skin 44.

30 The work 22 is initially placed upon the bar structure 32 to the right of the rollers 14, as viewed in Figure 1, and is then shifted along the guide discs 40 until the folded margin of the work is firmly gripped and positively advanced by the rollers 14. The needle 24 reciprocates within the space 52 (Figure 2) presented between the last two discs, toward the left end of the series (see Figures 1 and 2). The discs 40 reduce frictional resistance and thus facilitate 40 the ease with which the fur and lining material may be shifted along the bar structure. It will be noted that when my improved machine is employed, the pieces may be secured together without the slightest development of surface unevenness or irregularities. In other words, the outer or fur side of the skin 44 is not wrinkled or crimped (see Figure 5).

From the foregoing it will be apparent that my invention contemplates the provision of improved means whereby inner linings and the like may be secured to an outer piece such as a piece of fur. Obviously the invention is not limited to the specific structural features disclosed herein, but is capable of changes and modifications 55 without departing from the spirit and scope of the invention. The drawing shows the work as being fed from the right-hand side of the machine toward the left. In actual practice, however, most machines are right-handed in which case the work will move from the left-hand side 60 toward the right-hand side.

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

65 1. In a device of the character described, means adapted to impinge the opposite sides of folded sheets of material adjacent the sewing position at which said sheets are to be joined, sewing mechanism including a needle at said position 70 adapted to pass through the outer margin of an impinged fold, and guide means for guiding the material along a path of travel through said position including a series of rotatably supported disc members arranged in straight alignment in said 75 path of travel on both sides of the sewing position

and adapted to be positioned within said fold so as to retain said margin in a predetermined impinged position to be acted upon by said needle.

2. In a device of the character described, means including a pair of cooperative rollers 5 adapted to impinge the opposite sides of folded sheets of material adjacent the sewing position at which said sheets are to be joined, sewing mechanism including a needle at said position adapted to pass through the outer margin of an 10 impinged fold, and guide means for guiding the material along a path of travel through said position adapted to be positioned within said fold so as to retain said margin in a predetermined impinged position to be acted upon by said needle, said guide means including an elongated support 15 arranged in the path of travel at the sewing position and a series of rotatable discs carried in straight alignment by said support and adapted to engage said fold. 20

3. In a device of the character described, means adapted to impinge the opposite sides of folded sheets of material adjacent the point at which said sheets are to be joined to feed the sheets 25 along a path of travel through a sewing position, sewing mechanism including a needle located at the sewing position adapted to pass through the outer margin of an impinged fold, and guide means including a series of rotatably supported disc members in sequence in said path of travel 30 and adapted to be positioned within said fold so as to retain said margin at said sewing position in a predetermined impinged position to be acted upon by said needle.

4. In a sewing machine, means including a pair 35 of cooperating feed rollers located at a sewing position and adapted to impinge the opposite sides of folded sheets of material to feed the same along a path of travel through said position, sewing mechanism including a needle located at said 40 position adapted to pass through the impinged fold, and means for guiding the material along said path of travel including rotatable disc members positioned in the path of travel on both the approach and retreat sides of said sewing position 45 and adapted to engage within the fold of the material whereby to guide the material both to and from sewing position by rotatable guiding means.

5. In a sewing machine, means for feeding 50 folded sheets of material along a path of travel through a sewing position, sewing mechanism including a needle located at said position adapted to pass through the folded sheets of material, and means for guiding the material along said 55 path of travel to said sewing position including a plurality of rotatable disc members arranged in sequence in the path of travel on the approach side of said sewing position and adapted to engage within the fold of the material. 60

6. In a sewing machine, means for feeding folded sheets of material along a path of travel through a sewing position, sewing mechanism including a needle located at said position adapted to pass through the folded sheets of material, and anti-friction guiding means adapted for continuous operation for guiding the folded material 65 along said path of travel including a rotatable wheel member arranged on the approach side of the sewing position and a rotatable wheel member arranged on the retreat side of said sewing position, whereby the material is guided along the path of travel both to and from the sewing position by anti-friction guiding means. 70

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