Sept. 25, 1956 L. H. GEMME 2,763,879

METHOD OF MAKING BEADED WELTING FOR SHOES

Filed Nov. 3, 1954

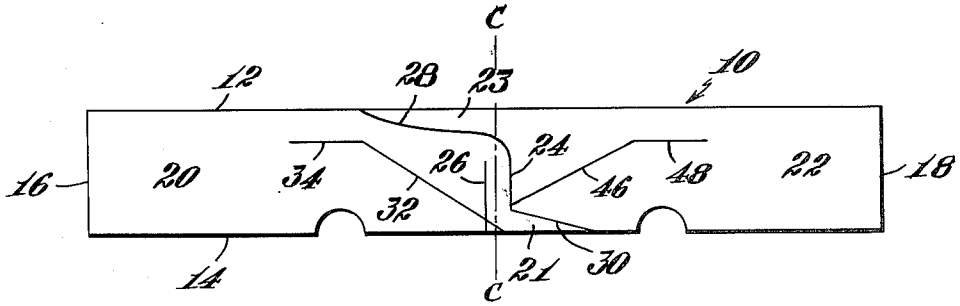


Fig. 1

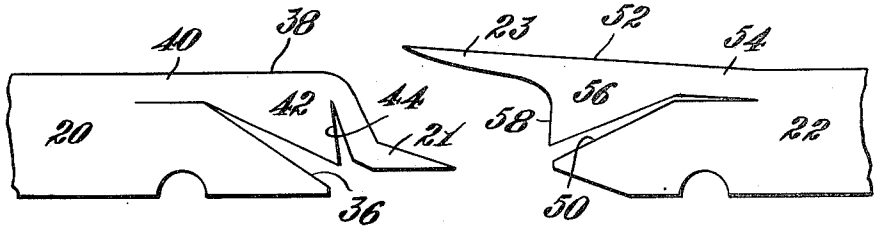


Fig. 2

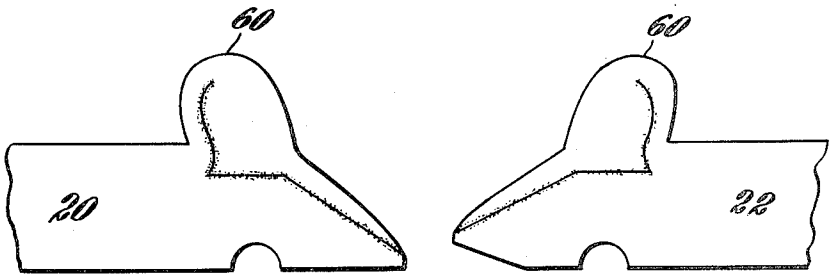


Fig. 3

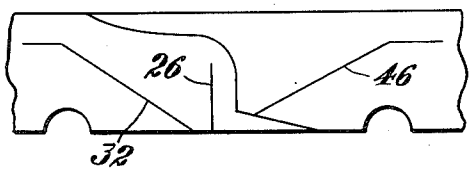


Fig. 4

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United States Patent Office 2,763,879 Patented Sept. 25, 1956

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METHOD OF MAKING BEADED WELTING FOR SHOES

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Application November 3, 1954, Serial No. 466,644

2 Claims. (Cl. 12—146)

This invention relates to making welt strips and more especially to a method of making bead welting and has for its principal object to provide an improved method of manufacture of two welt strips from a single fillet of corresponding or different widths and at the same time to employ the fundamental principles of effecting economy in manufacture described in my copending applications Serial No. 466,641, filed November 3, 1954, Serial No. 466,642, filed November 3, 1954, and Serial No. 466,643, filed November 3, 1954.

According to the invention the starting strip as herein illustrated is made somewhat wider than the combined widths of the two strips to be produced and this is operated upon in such fashion that the amount in excess of the width of the strips to be produced is divided between them to add substance to the bead forming flap of each strip. To this end a pair of spaced parallel cuts are made in the starting strip intermediate its lateral edges, which are substantially perpendicular to the top and bottom surfaces. One of the perpendicular cuts has but a single course which starts at the bottom of the starting strip, travels substantially vertically upward and terminates above the median plane. The other has a vertical course, both ends of which terminate between the surfaces and has lateral courses at its opposite ends connecting it to the opposite surfaces of the strip so as to effect division thereof. One of the lateral courses enters the top surface of the starting strip and travels downwardly and laterally to the upper end of the vertical course and the other starts in the bottom of the strip and travels upwardly to the lower end of the vertical course. The aforesaid cuts separate the strip into two independent welt strips, each of which has a substantially vertical inner edge supplemented by an extension integral therewith which is borrowed from the opposite strip and part of the intermediate substance in excess of the width of the strips. Separation of the welt flaps is effected by making cuts which travel upwardly and outwardly from the base of each strip at its inner edge beyond the median plane so as to separate the inner edges into two layers. Each lower layer constitutes a shelf and has upwardly facing inclined and horizontal surfaces. Each upper layer constitutes a bead forming flap which includes the borrowed extension, has a hinge portion of less than one-half the thickness of the strip connecting it to the strip and a core portion of greater thickness than one-half the thickness of the strip. The borrowed extension provides an anchoring tab and in setting up the bead the hinge is bent upwardly and doubled on itself, the core is seated on the horizontal surface of the shelf and the tab adhesively secured to the inclined surface of the shelf.

In the description of the procedure for making the welt strip produced in accordance with the method outlined, it is to be understood that the order or sequence of steps in making the cuts for separating the starting strip or fillet into separate welt strips, separation of the inner or sewing edge to provide a shoulder and bead flap and setting up and forming the bead is not to be interpreted as limiting

in any respect for it is intended to be within the scope of the invention to transpose, combine or separate the steps or the order of steps in whatever fashion is deemed most expedient for economical manufacture.

The invention will now be described in greater detail with reference to the accompanying drawings wherein:

Fig. 1 shows a vertical section through a fillet which has been operated upon by cutting to divide it into two welt strips prior to separation of the strips;

Fig. 2 shows the welt strips of Fig. 1 separated from each other with the flaps partially lifted from the subjacent shoulders;

Fig. 3 shows the welt strips with the flaps folded and secured to the shoulders to provide beads; and

Fig. 4 is a view corresponding to Fig. 1 showing the bead forming cuts starting in the lower surfaces of the strip outwardly of their common inner edges.

Referring to Fig. 1 there is shown in cross section a starting strip **10** which is usually in the form of a substantially endless strip of good quality firm leather of substantially rectangular cross section having parallel surfaces **12** and **14** which are respectively grain and flesh and square outer edges **16** and **18**. For the purpose of this invention the starting strip is made wider than the combined width of the two strips to be cut therefrom. Solely as an example without limitation, the width of the starting strip is increased by 1/32 of an inch, so that its overall width is 1 1/32 of an inch. From this starting strip two 1/2 inch welt strips are produced.

In accordance with the procedure for making the welt strips from the starting strip, cuts are made in the strip which include portions **24** and **26** which are preferably substantially equidistant from the longitudinal center line *c—c* (Fig. 1) of the starting strip and from the lateral outer edges thereof so that they include between them the excess material. It is to be understood, however, that the portions of the cuts **24** and **26** are not necessarily located equally distant from opposite sides of the median plane but may be shifted to the right or left thereof to permit making one of the strips wider or narrower than the other. The cut **26** has a single course which starts in the bottom of the fillet and travels vertically upwardly beyond the median plane terminating at its upper end approximately 3/5 of the way through the strip. The cut which includes the portion **24** has a vertical course which is located between the surfaces and has at its upper and lower ends lateral courses **28** and **30**. The course **28** enters the top of the starting strip at the left-hand side of the longitudinal center line and travels downwardly above the upper end of the course **26** and across the longitudinal center line to the upper end of the vertical portion **24**. The course **30** enters the bottom of the strip and travels upwardly toward the longitudinal center line to the lower end of the vertical portion **24**. Thus the surplus substance between the portions **24** and **26** is added to the left-hand strip while that above is added to the right-hand strip. The cut made up of the portions **24**, and courses **28** and **30** divides the starting strip into two welt strips **20** and **22**, having a common inner edge **24** and one of which has an extension **21** and the other an extension **23** integral therewith which was borrowed from the substance of the opposite strip. The divided strips are each operated upon to provide bead forming flaps by making cuts which travel upwardly and outwardly from their inner edges. As shown in Fig. 1 the cut in the left-hand strip has an inclined course **32** and a horizontal course **34** which divides the inner edge into two layers, the lower one of which constitutes a shelf **36** and has upwardly facing inclined and horizontal surfaces and the upper one of which constitutes a bead forming flap **38**. The inclined course **32** is started just to the right of the lower end of the course **26** so as to cut the heel from the

extension 21 and make the lower edge of the shelf blunt rather than a feather. The small strip removed by the cut is negligible. The bead forming flap is connected to the strip by a hinge 40 of lesser thickness than one-half the thickness of the strip, has a core 42 of greater thickness than one-half the thickness of the strip and the extension 21 which is integral therewith provides an attaching tab. When the bead is set up on the shelf the bead forming flap is folded upwardly on its hinge 40, the core is seated on the horizontal surface of the shelf with the surface 44 in contact therewith and the extension 21 is laid against the inclined surface thereof. As illustrated in Fig. 4 the cut 32 in the left-hand strip may be started in the lower surface at the left-hand side of the cut 26 thereby increasing both the thickness and height of the bead.

The right-hand strip is operated upon in a similar manner by making a cut having an inclined course 46 and a horizontal course 48 thereby separating the inner edge of the strip into two layers, the lower of which constitutes a shelf 50 having upwardly facing inclined and horizontal surfaces and the upper layer of which constitutes a bead forming flap 52. The bead forming flap is connected by a hinge 54 to the strip which is of less than one-half the thickness of the strip, has a core 56 of greater thickness than one-half the thickness of the strip and includes the extension 23 which forms the attaching tab. To set the bead up the flap is lifted on its hinge 54 so as to seat the core on the horizontal surface with the surface 58 in contact therewith and the extension 23 laid against the inclined surface thereof. Adhesive is employed to unite the parts and pressure may be employed to mold the bead to proper shape. The heightwise position of the cut 46 in the right-hand strip of course may be varied with an increase in the thickness of the bead as it approaches the corner. If it is started as it may be, in the lower surface of the strip as shown in Fig. 4 rather than in the edge face the thickness and height of the bead may be increased still more.

The resulting bead 60 (Fig. 3) in each case rises substantially vertically from the upper surface of the welt, has a rounded top and an inclined inner surface having portions of different inclination. The upper portion of the inner surface is steeper than the lower portion thus providing a generally concave face for snug engagement with the shoe. The entire surface of the bead produced from the right-hand strip is grain leather while that produced from the left-hand strip is partly grain and partly flesh.

Preferably the hinge portions of the flaps and the borrowed portion which provide the anchoring tabs are approximately 1/5 the thickness of the strip while the core portions are approximately 3/5 the thickness of the strip.

The stitch groove at the bottom side of the strip may be made at any time during the manufacture.

As previously stated the order of making the cuts is of relatively unimportance so long as they are made in such fashion as to divide the strips and separate the bead flaps in the manner disclosed to permit forming the beads. Accordingly the sequence of steps as recited in the appended claims is not intended to be limiting.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the appended claims.

I claim:

1. The method of making two bead welt strips from a single starting strip comprising making cuts in the starting strip, one of said cuts having a single course which starts at the bottom of the strip and travels upwardly beyond the median plane, the other of which has an intermediate course spaced from the single course and whose ends terminate between the top and bottom of the strip, said second mentioned cut having laterally and oppositely extending courses at opposite ends of the intermediate course, one of which enters the top surface of the starting strip at one side of the center line, travels downwardly above the upper end of the first named course to the upper end of the intermediate course, and the other one of which enters the bottom of the strip at the opposite side of the center line and travels upwardly to the lower end of the intermediate course, said second mentioned cut separating the starting strip into two independent welt strips.

2. The method of making two bead welt strips from a single starting strip comprising making cuts in the starting strip, one of said cuts having a single straight course which starts at the bottom of the strip and travels upwardly beyond the median plane, the other of which has an intermediate course parallel to the single course of the first cut and whose ends terminate between the top and bottom of the strip, said courses being equidistant from the center line of the starting strip, said second mentioned cut having laterally and oppositely extending courses at opposite ends of the intermediate course, one of which enters the top surface of the starting strip at one side of the center line, travels downwardly above the upper end of the first named course to the upper end of the intermediate course, and the other end of which enters the bottom of the strip at the opposite side of the center line and travels upwardly to the lower end of the intermediate course, said second mentioned cut separating the starting strip into two independent welt strips.

References Cited in the file of this patent

UNITED STATES PATENTS

2,142,228 Vizard ---------- Jan. 3, 1939