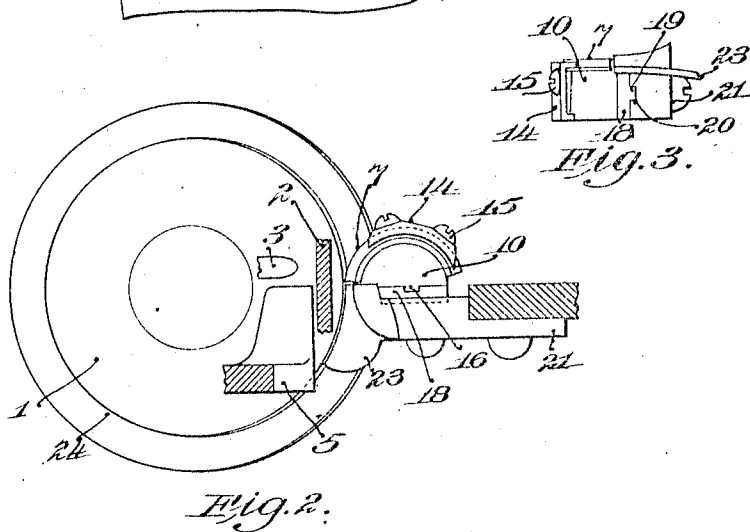
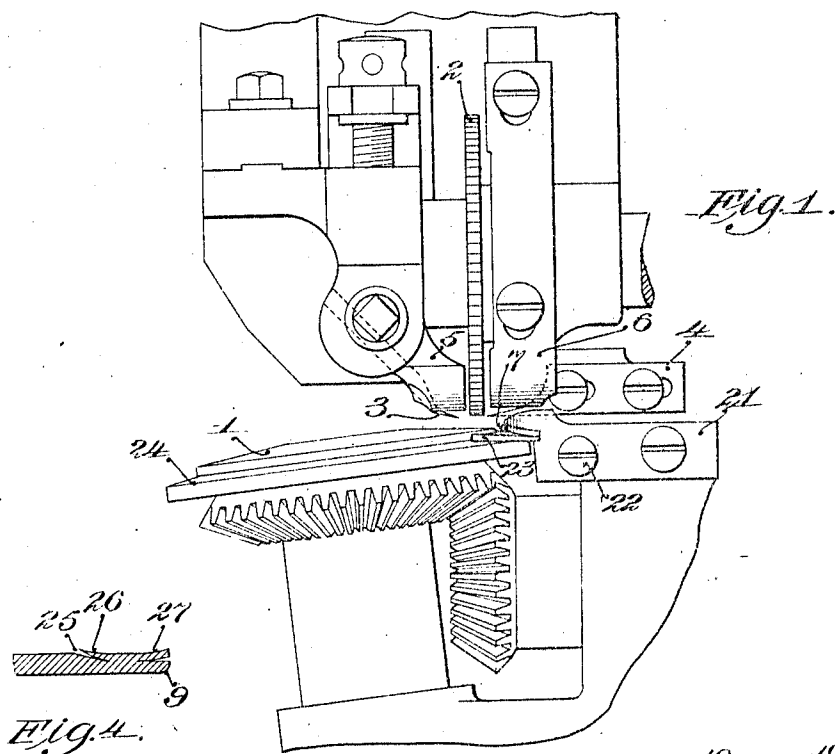


W. GORDON.
MACHINE FOR MAKING INSOLES.
APPLICATION FILED OCT. 6, 1904.

989,142.

Patented Apr. 11, 1911.

2 SHEETS-SHEET 1.



Witnesses
Edward S. Day
Farnum F. Dorsey

Inventor
William Gordon
by his Attorneys
Phillips, Von Gersdorff & Fish

W. GORDON.
MACHINE FOR MAKING INSOLES.
APPLICATION FILED OCT. 8, 1904.

989,142.

Patented Apr. 11, 1911.

2 SHEETS—SHEET 2.

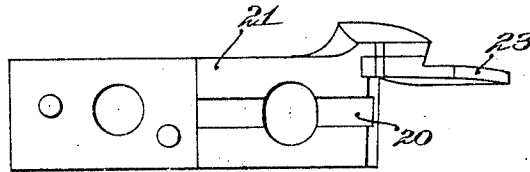


Fig. 5.

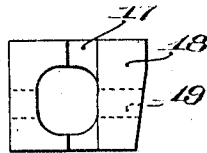


Fig. 6.

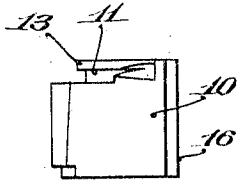


Fig. 7.

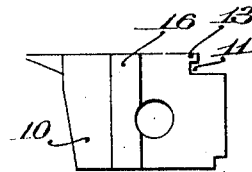


Fig. 8.

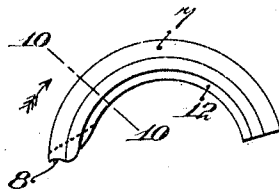


Fig. 9.



Fig. 10.

Witnesses
Edward S. Day
Samuel F. Dorsey

Inventor
William Gordon
by his Attorneys
Phillips Van Coven & Cook

UNITED STATES PATENT OFFICE.

WILLIAM GORDON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

MACHINE FOR MAKING INSOLES.

989,142.

Specification of Letters Patent. Patented Apr. 11, 1911.

Application filed October 6, 1904. Serial No. 227,411.

To all whom it may concern:

Be it known that I, WILLIAM GORDON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Machines for Making Insoles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to machines for making insoles, and more particularly to a feather-edging or edge-beveling attachment for insole channeling machines.

In the manufacture of insoles the stock is first cut up into blanks having the shape of the completed sole and these blanks are then passed through a channeling machine which cuts a channel in one surface of the sole and simultaneously forms a lip or channel flap and which also either splits the edge of the blank to form another lip or removes a portion of the stock from the edge of the channeled surface of the sole to form a shoulder at the base of the channel flap or lip. Insoles made in this manner present a sharp edge at the margin of the unchanneled or unlippped surface of the sole, which edge tends to cut the lining and upper of the completed shoe. Also when the shoe is worn the margin of the insole sometimes curves upwardly and this sharp edge forms a ridge upon the inside of the shoe which renders the shoe extremely uncomfortable to the foot of the wearer. To remove this sharp edge the margin of the unlippped or unchanneled surface of the sole is sometimes beveled, the beveling being performed as an operation separate from the operation of channeling the sole. This separate operation, however, adds to the cost of manufacture and consequently is usually omitted.

The object of the present invention is to provide means whereby the edge of the unlippped or unchanneled surface of the sole can be beveled simultaneously with the formation of the channel and lip or lips, so that an insole having the edge of its unchanneled or unlippped surface beveled can be produced without subjecting the sole to a separate operation and without adding to the cost of manufacture.

With this object in view the present invention contemplates the provision in a ma-

chine for making insoles provided with a lip forming knife or knives, of a beveling knife arranged to act on the edge of the unlippped surface of the sole. The lip forming knife or knives may be of any usual or suitable shape and arrangement, as the invention, broadly considered, contemplates the use of a beveling knife arranged to act on the edge of the unlippped surface of the sole, in combination with either a channeling knife which cuts a channel and forms a lip or channel flap, or in combination with an edge splitting knife or knife for forming a shoulder at the edge of the sole.

In insole channeling machines the edge gage is usually movably mounted so that it can be moved during the operation of the machine to vary the position of the sole edge with relation to the lip forming knife or knives. It is desirable that the bevel formed at the edge of the unlippped surface of the sole be uniform throughout, and accordingly, in the preferred form of the present invention, the beveling knife is mounted to move with the edge gage. In the specific embodiment of the invention hereinafter described, the movement of the beveling knife with the edge gage is conveniently produced by mounting the knife upon the gage.

In addition to the features of invention above referred to, the present invention also consists in certain constructions and arrangement of parts hereinafter described and claimed, the advantages of which will be obvious to those skilled in the art.

A preferred form of the present invention is illustrated in the accompanying drawings in which—

Figure 1 is a view in side elevation of a portion of the insole channeling machine with the preferred form of the invention applied thereto, so much only of the machine being illustrated as is necessary to show the connection of the present invention therewith. Fig. 2 is a sectional plan view illustrating the relative arrangement of the work support, the feed wheel, and the channeling and beveling knives. Fig. 3 is an end view of the edge gage with the support for the unlippped surface of the sole and the beveling knife mounted thereon. Fig. 4 is a detail sectional view illustrating the appearance of the edge of the insole produced by the machine illustrated in Fig. 1. Fig. 5 is a view in side elevation of the edge gage

and the support for the unlippped surface of the sole carried thereby. Fig. 6 is a view in side elevation of a block upon which the knife carrying block is mounted, and which is adjustably mounted upon the edge gage. Fig. 7 is a view in front elevation of the knife carrying block. Fig. 8 is a side elevation of the knife carrying block illustrated in Fig. 7, looking from the right of the figure. Fig. 9 is a plan view of the beveling knife and Fig. 10 is a sectional view of the knife taken on the line 10—10 of Fig. 9.

With the exception of the edge gage and the parts mounted thereon and a slight change in the work support hereinafter referred to, the parts of the machine illustrated in Figs. 1 and 2 are constructed and arranged in the same manner as the corresponding parts of the well-known Goodyear insole channeling machine, 1 indicating the work support, 2 the feed wheel, 3 the channeling knife, 4 the edge splitting knife, 5 the presser foot for the channeling knife, and 6 the presser foot for the edge splitting knife.

The beveling knife is indicated at 7, and as illustrated, comprises a shank portion curved in the arc of a circle and provided at one end with a cutting edge 8. The upper surface of the knife is grooved, as is clearly shown in Fig. 10, and the edge 8 is formed by a bevel on the lower side of the knife so that the edge of the knife is curved and acts to produce a rounded edge on the unlippped surface of the sole as indicated at 9 in Fig. 4. The beveling knife is mounted upon a knife carrying block 10 which is provided with a curved knife receiving guideway 11, the upper surface of the knife being recessed as indicated at 12 to receive a projecting flange 13 of the guideway. A clamping plate 14 is secured to the block 10 by screws 15 and frictionally engages the beveling knife so as to securely hold it in any position to which it is adjusted. The knife carrying block 10 is mounted upon the edge gage of the machine as will be hereinafter described, the beveling knife being arranged in a horizontal plane with its cutting edge extending transversely to the direction of feed. The position of the knife in the machine will be clearly understood from an inspection of Figs. 1 and 2, and it will be seen that by adjusting the knife on its guideway in the block 10, the cutting edge of the knife will be adjusted in the direction of feed. The cutting edge of the knife can thus be brought to the desired position longitudinally of the direction of feed regardless of any shortening of the knife produced by regrinding.

The knife carrying block 10 is provided with a vertical lip 16 which is received in a vertical slot 17 cut in a block 18. The block 18 is provided with a horizontal lip 19

which is received in a horizontal slot 20 cut in the edge gage 21 and both blocks 10 and 18 are secured to the edge gage by means of a bolt 22 passing through elongated slots in the edge gage and block 18 and screwing into the block 10. The cutting edge of the beveling knife can thus be adjusted in the plane of the sole transversely to the line of feed by adjusting the block 18 on the edge gage 21, and the cutting edge of the knife can be adjusted in a direction perpendicular to the plane of the sole by adjusting the block 10 upon the block 18. By means of these adjustments the cutting edge of the knife can be brought into a position to act properly upon the edge of the unlippped surface of the sole and remove any desired amount of stock therefrom.

The edge gage 21 is mounted in the same manner as in the Goodyear insole channeling machine hereinbefore referred to, so as to be movable in the plane of the sole transversely to the line of feed. When the edge gage is moved to vary the position of the edge of the sole with relation to the channeling and edge splitting knives, the beveling knife is also moved so that the action of the beveling knife upon the edge of the unlippped surface of the sole is uniform throughout.

In order that the beveling knife may act with certainty to remove the skiving from the edge of the sole, it is necessary that means in addition to the work support be provided for supporting the unlippped surface of the sole in proximity to the knife. In the illustrated embodiment of the invention accordingly, a support 23 has been provided which, as shown, consists of a plate formed integral with or secured to the edge gage. This plate projects from the edge gage beneath the sole and is received in an annular recess 24 cut in the periphery of the main work support. The plate 23 moves with the edge gage and thus serves at all times to support the unlippped surface of the sole in proximity to the cutting edge of the beveling knife.

The operation of the machine illustrated in the drawings will be clearly understood from the description above given of the construction and arrangement of the various parts, and it need only be stated that as the insole is fed through the machine the channeling knife acts to form the channel and channel flap or lip 26, the edge splitting knife acts to form the lip 27, and the beveling knife acts to form the bevel 9 at the edge of the unlippped surface of the sole, the skiving removed passing beneath the beveling knife through the opening between the edge of the knife and the block 10.

The nature and scope of the present invention having been indicated and a preferred embodiment of the invention having

been specifically described, what is claimed is:—

1. A machine for making insoles, having, in combination, a lip forming knife, and a beveling knife arranged to act on the edge of the unlipped surface of the sole.

2. A machine for making insoles, having, in combination, a channeling knife, an edge splitting knife, and a beveling knife arranged to act on the edge of the unchanneled surface of the sole.

3. A machine for making insoles, having, in combination, a lip forming knife, an edge gage movable to vary the position of the sole edge with relation to the lip forming knife, and a beveling knife movable with the edge gage and arranged to act on the edge of the unlipped surface of the sole.

4. A machine for making insoles, having, in combination, a lip forming knife, an edge gage movable to vary the position of the sole edge with relation to the lip forming knife, a support on said gage for the unlipped surface of the sole, and a beveling knife mounted on said gage and arranged to act on the edge of the unlipped surface of the sole.

5. A machine for making insoles, having, in combination, a lip forming knife, an edge gage movable to vary the position of the sole edge with relation to the lip forming knife,

a support on said gage for the unlipped surface of the sole, a rotatable work support provided with a recess to receive said support, and a beveling knife mounted on the edge gage and arranged to act on the edge of the unlipped surface of the sole.

6. An edge gage for an insole channeling machine, having mounted thereon a support for the unchanneled surface of the sole and a beveling knife arranged to act on the edge of the unchanneled surface of the sole.

7. A machine for making insoles, having, in combination, a lip forming knife, a beveling knife arranged to act on the edge of the unlipped surface of the sole, and means for supporting the unlipped surface of the sole in proximity to the beveling knife.

8. A machine for making insoles, having, in combination, a knife for operating on one side of an insole blank to form a lip and a feather, and a beveling knife operating simultaneously on the other side of the blank to bevel the edge of the feather so formed, substantially as described.

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

WILLIAM GORDON.

Witnesses:

FRED O. FISH,

ALFRED W. HILDRETH.