METHOD OF MAKING SHOES

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Fig. 1

Fig. 2

Witness

Inventor

[Signatures]

[Signatures]
To all whom it may concern:

Be it known that I, Laurence E. Topham, of Swampscott, Massachusetts, have invented certain new and useful Improvements in Methods of Making Shoes; 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 invention relates to the art of making shoes, and more particularly to the method of beveling or "button" the ends of the welt of a welt shoe preparatory to the attachment of the outsole.

In the manufacture of welt shoes the welt and upper are attached to the insole by the inseam, which begins at the breast line on one side and terminates at the breast line on the other side of the sole. The inseam may be sewed by hand, but is usually sewed on an inseam sewing machine. At the beginning of the inseam a free end of the welt is held by the operator or by a welt holder until after the initial stitches of the seam have been sewed, and at the completion of the inseam the welt is severed by the operator or by a welt cutter to leave a free end of welt at this end of the seam. The free ends of the welt are subsequently beveled off or "buttoned" by hand or by machines specially constructed for this operation. This method of butting the welt ends requires the services of a skilled operator, or additional equipment in the form of a welt butting machine, and usually results in more or less waste of the welt, due to the unequal or surplus length of the free ends.

The present invention eliminates the usual operation of butting the free ends of the welt after it has been attached to the shoe, thereby reducing the skilled labor and equipment required, and also avoids the waste of weling incident to the usual methods of manufacture. This is accomplished by transversely skiving the welt after the welt has been partially attached, in such manner and at such a point that upon severing the welt at the completion of the attaching operation a properly beveled or butted free end will be left at the end of the attached welt, and a proper bevel will also be left on the end of the weling for attachment to the succeeding shoe. The transverse skiving should form a depression having gradually sloping sides which converge and pass nearly through the weling midway of the skiving, and it should be so located in the weling that it will be at the end of the welt attaching seam when the seam is completed. When the welt is severed midway of the skiving, one of the sloping sides will form a proper bevel at the free end of the attached welt, while the other sloping side will form a bevel at the end of the weling which is to become the free end of the welt at the beginning of the next attaching operation.

The invention is illustrated in the accompanying drawing, in which Figure 1 is a diagrammatic view showing a welt attaching inseam partially sewn and the welt transversely skived, and Fig. 2 is a view showing the end of the inseam and attached welt.

In practicing the present invention as illustrated in the drawing the inseam may be sewed in the usual manner, say by hand or upon an inseam sewing machine in which the shoe is manipulated by the operator or automatically. After the inseam is partially sewed, the welt is transversely skived, as indicated at 2. It is desirable that the inseam be nearly completed before the welt is skived, since inaccuracy in its final location due to stretch of the welt is thus avoided. The skiving is done at the point in the weling corresponding to the welt end when the inseam is completed and the welt severed at the proper distance from the end of the seam. The skiving may be conveniently and accurately done by a suitable skiving knife arranged to be passed across the weling by the operator or by automatically operating mechanism when the proper point in the sewing of the inseam is reached. The skiving knife should be arranged to form a transverse depression deep enough to nearly sever the welt, and having gradually sloping sides 4 and 6 which converge towards the center of the skiving. A slit 8 is preferably cut midway of the skiving which extends from the inner edge partially across the weling. This enables the welt to be severed after the inseam is finished with less danger of injury to the upper. When the inseam is completed it will end at the beginning of the sloping surface 4, as
indicated in Fig. 2, and after the welt is severed midway of the depression 2 this surface will correspond to the bevel formed on the free end of the welt by the usual welt butt- 
ing operation. The sloping surface 6 which is left at the end of the welt may be so located at the beginning of the succeeding inseam that it will correspond to the bevel formed on this end of the welt by the usual welt butt- 
ing operation. When the attach- 
ment of this welt by the inseam is completed, therefore, the ends of the welt will be properly beveled for the attachment of the outsole without any further manipula- 
tion or subsequent operation. The beveling or butting of the welt ends may also be accomplished without waste of welting, and in case the sewing of the inseam is done on an automatic machine, without interrupting the sewing of the inseam.

What is claimed is:

1. An improvement in the art of making shoes which consists in transversely skiving the welt after the inseam is partially sewed to form a bevel surface at a point corresponding to the welt end of the finally attached welt, completing the sewing of the inseam, and severing the welt at the end of the beveled surface.

2. An improvement in the art of making shoes which consists in transversely skiving the welt after the inseam has been partially sewed to form oppositely sloping surfaces which pass nearly through the welt at a point corresponding to the welt end of the finally attached welt, completing the sewing of the inseam, and severing the welt midway of the skiving.

3. An improvement in the art of making shoes which consists in partially sewing the inseam, transversely skiving the welt at a point corresponding to the welt end of the finally attached welt, cutting a slit midway of the skiving from the inner edge part way across the welt, and completing the sewing of the inseam and the severing of the welt.

4. An improvement in the art of making shoes which consists in transversely skiving the welt from edge to edge to form oppositely beveled welt ends when the welt is severed midway the skiving.

5. An improvement in the art of making shoes which consists in cutting in the welt during the sewing of the inseam a transverse depression having oppositely sloping surfaces to provide a butted end for the welt being attached and a butted welt end for attachment to the succeeding shoe upon severing the welt between the surfaces.

6. An improvement in the art of making shoes which consists in producing in a welt a recess extending from edge to edge and having oppositely inclined sides arranged to form beveled surfaces at the ends of the respective portions of the welt on each side of the recess when the welt is severed substantially at the central point in the recess.

7. An improvement in the art of making shoes which consists in producing in a welt a recess extending from edge to edge and having oppositely inclined sides, and severing the welt at substantially the central point in the recess.

8. An improvement in the art of making shoes which consists in forming in a welt, at a single operation, an inclined cut extending from edge to edge to form a beveled surface at one end of the portion of the welt to be attached to one shoe, and an oppositely inclined cut extending from edge to edge to form a beveled surface at the opposite end of another portion of the welt to be attached to another shoe.

9. An improvement in the art of making shoes which consists in attaching one end of the welt to a shoe and before the attaching operation is completed making an inclined cut partially through the welt to form a beveled surface at the end of the welt attached to the shoe, completing the attaching opera- 
tion, and severing the welt.

10. An improvement in the art of making shoes which comprises attaching a welt to a shoe and butting the welt after it is but- 

tially attached.

11. An improvement in the art of making shoes which consists in attaching a welt to a shoe, during the attaching operation mak- 
ing an inclined cut partially through the welt, and completely across the same, to form a beveled surface at the end of the welt when the attaching operation is completed, and completing the attaching operation and severing the welt.

12. An improvement in the art of mak- 
ing shoes which consists in producing in a welt a recess having oppositely inclined intersecting sides, and severing the welt substantially at the central point in the recess to form beveled surfaces at the ends of the respective portions of the welt on each side of said point.

13. An improvement in the art of mak- 
ing shoes which consists in transversely skiving a welt after it has been partially attached to form a bevel surface at a point corresponding to the welt end of the finally attached welt, completing the attaching of the welt, and severing the welt at the end of the beveled surface.

14. An improvement in the art of mak- 
ing shoes which consists in transversely skiving a welt after it has been partially attached to form oppositely sloping surfaces which pass nearly through the welt at a point corresponding to the welt end of the finally attached welt, completing the attaching of the welt, and severing the welt midway of the skiving.
15. An improvement in the art of making shoes which consists in transversely skiving a welt to form oppositely beveled welt ends when the welt is severed midway of the skiving.

16. An improvement in the art of making shoes which consists in transversely skiving a welt after it is partially attached to form in one face of the welt oppositely sloping converging surfaces, and severing the welt midway of the skiving.

17. An improvement in the art of making shoes which consists in attaching a welt and transversely skiving the welt during the attaching at a point corresponding to the end of the finally attached welt.

18. An improvement in the art of making shoes which consists in sewing a welt to a shoe insole and making a cut in the welt during the sewing at a point to register with a pre-determined point on the shoe sole.

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