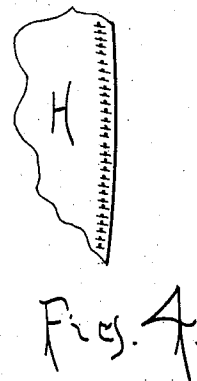
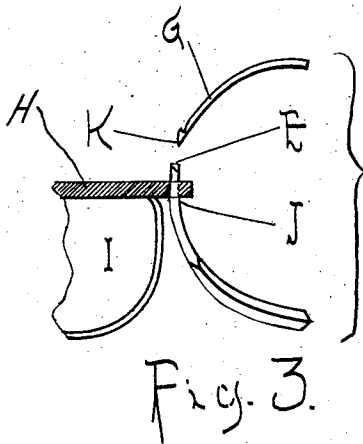
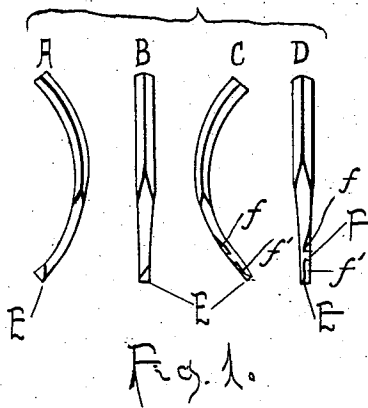


W. F. LEWIS.
MACHINE AWL.
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1,024,795.

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MACHINE-AWL.

1,024,795.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM F. LEWIS, a citizen of the United States of America, residing at Lynn, in the county of Essex and Commonwealth of Massachusetts, have invented a new and useful Improvement in Machine-Awls, of which I do declare the following to be such a full, clear, and exact description as will enable others versed in the art to which it appertains to make and use my said invention, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, in explaining its nature.

Similar letters of reference refer to similar parts throughout the various views.

My invention relates to knife edged awls designed for use in stitching machines and more particularly in what is known as the Goodyear rapid stitcher, used extensively by shoe workers in sewing shoe soles on Goodyear welts, and has for its objects, 1st, to provide a means of sufficiently perforating the article to be stitched by a smaller size awl than has heretofore been used, thereby insuring a smaller cut or slit in the article stitched. 2nd, to provide a means of making a perforation, slit shape in form yet provided with a right angled recess in which the lock stitch of the thread may tightly fit, and thus be assured of thread adhesion long after the exposed surface of the threads, have been worn away. 3rd, to thereby improve the appearance of the completed stitch, and to secure other advantages and results some of which may be referred to hereinafter in connection with the description of the various parts. I attain these objects as shown in the accompanying drawings, in which,

Figure 1, shows my improved awl from all four sides. Fig. 2, shows the detail end of my awl on an angle just between C and D in Fig. 1. Fig. 3, shows the relative position of my awl to the needle which follows it up in the Goodyear rapid stitcher. Fig. 4, shows a section of a sole in which perforations have been made by my improved awl.

In Fig. 1, A, B, C and D show my awl from its four sides. The awl is curved in

form and has a knife edge at its sharp end E. Toward the lower end, the awl is peculiarly formed or shaped, so as to form a tooth F; that is to say, the lower end is provided with two longitudinal notches or grooves *f*, *f'*, separated by the tooth F, which is slightly removed from the lower end of the awl. The tooth F saws into the material which the awl enters and creates therein a roughened furrow at right angles to the cut made by the knife edge of the awl, in which roughened furrow the lock stitch of the thread used becomes firmly embedded. The addition of the roughened furrow makes it unnecessary to have as large a cutting edge on the awl as is ordinarily required to let the needle and thread through, and thus I am enabled to use a smaller sized awl. All this adds the decided advantage of creating in the finished stitch a tight fitting thread which as I have above stated adds to its adhesiveness and increases the life of the shoe. To those inexperienced in the art to which my said invention relates it might seem evident that the same results would be obtained by using a round awl, but experience has demonstrated that in the use of a machine awl it is absolutely essential to insure the best results to have an awl provided with a knife edge and formed as I have described. It is by the addition of the auxiliary tooth that I obtain the stated results.

In Fig. 3, G shows the needle which follows the awl through the sole H of the shoe. J represents a loop of thread which engages in the hook K of the needle G when said needle has passed through the sole H.

Having thus described my invention, what I claim as new is:—

A machine-awl provided, at its lower end, with a knife edge, with two longitudinal notches adjacent said lower end, and with a tooth separating said notches; substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand in the presence of two attesting witnesses.

WILLIAM F. LEWIS.

Witnesses:

CHARLES W. LOVETT,
HAROLD A. JOHNSON.