

H. T. MUMFORD.

BELT LACING TOOL.

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940,401.

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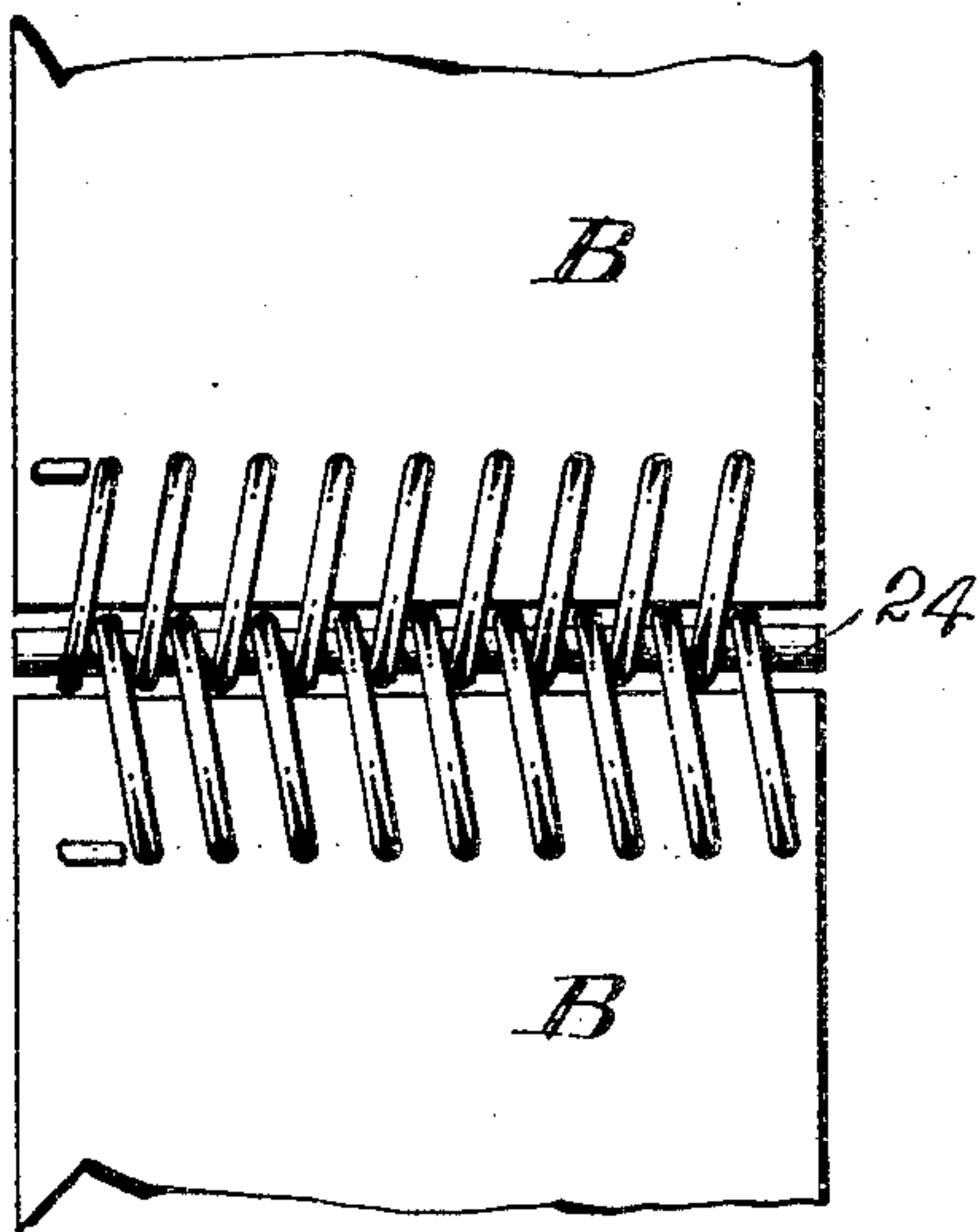
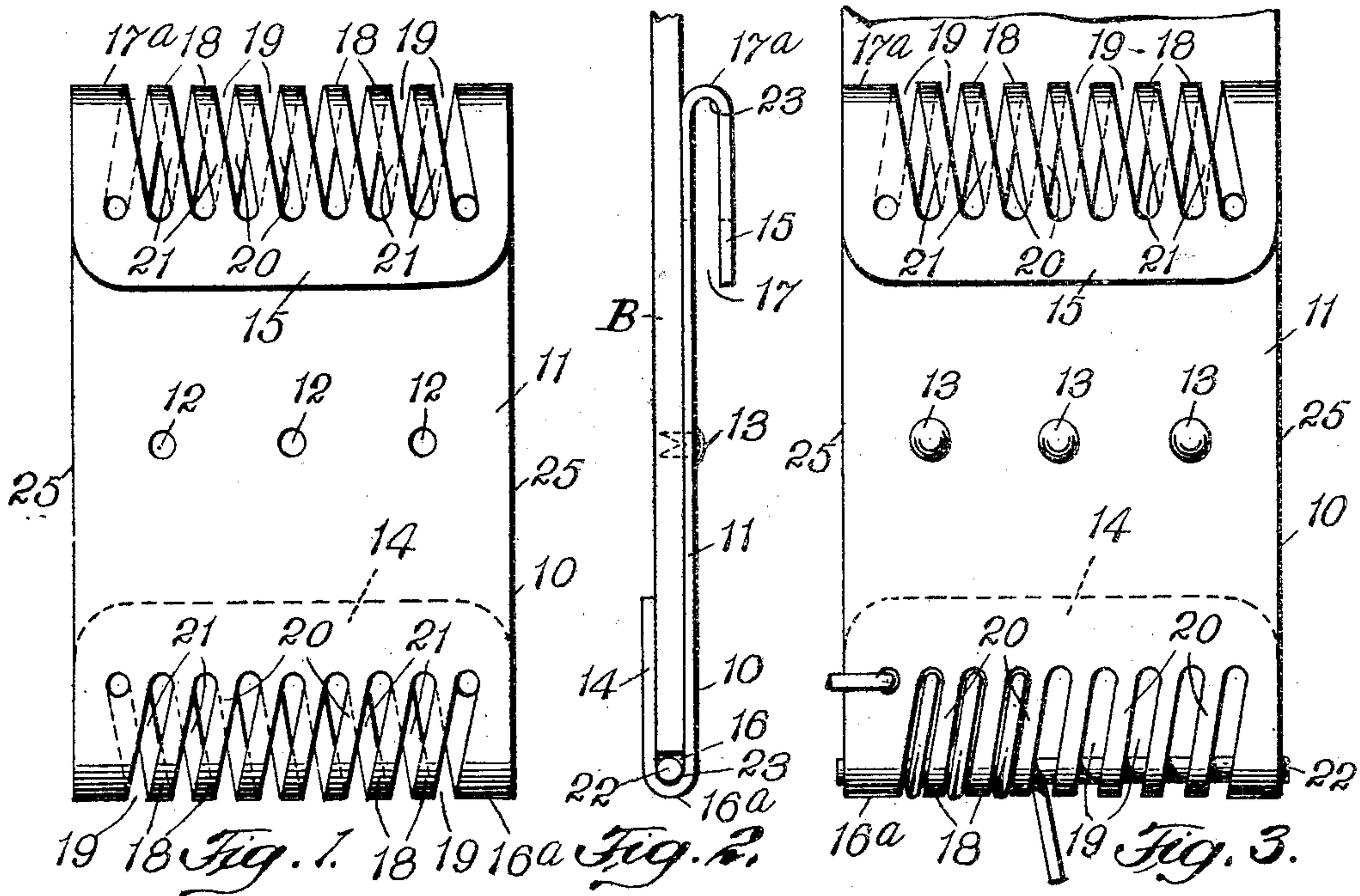


Fig. 4.

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UNITED STATES PATENT OFFICE.

HARRY THOMAS MUMFORD, OF NEW YORK, N. Y., ASSIGNOR TO MUMFORD MANUFACTURING AND SUPPLY COMPANY, A CORPORATION OF NEW YORK.

BELT-LACING TOOL.

940,401.

Specification of Letters Patent.

Patented Nov. 16, 1909.

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To all whom it may concern:

Be it known that I, HARRY THOMAS MUMFORD, a subject of the King of England, and a resident of New York, county and State of New York, have invented certain new and useful Improvements in Belt-Lacing Tools and Squares, of which the following is a full, clear, and exact description.

This invention relates more particularly to a tool for forming a metallic lacing on each end of a belt.

The primary object of the invention is to provide a simple and efficient tool which may be cheaply made and which is so formed that the tool may be readily placed over the end of the belt and held in position to form a guide for the metallic wire employed as a lacing, and to arrange the lacing in the form of a spiral the convolution of one end of the belt being opposite to that of the other end to adapt the same to be interlocked and held together when the ends of the belt are brought in close relation to join its ends.

Another object of the invention is to provide a device which may be employed as a square to trim the edge of the belt properly for lacing or for other purposes.

A further object of the invention is to provide a device which may be made out of sheet metal, which is adapted to hold the lacing properly until it is formed in the required shape, and which permits the tool to be shifted without removing the usual forming mandrel.

With these and other objects in view, the invention will be hereinafter more particularly described with reference to the accompanying drawings which form a part of this specification, and will then be pointed out in the claims at the end of the description.

In the drawings, Figure 1 is a plan view of one form of device embodying my invention. Fig. 2 is an end elevation of the tool as applied to one end of a belt. Fig. 3 is an end view of the device showing the lacing in the course of being made; and Fig. 4 is a plan view showing the ends of the belt properly laced and held together.

The tool 10 has a substantially rectangular body portion 11 provided with openings 12 whereby the tool may be temporarily fastened by rivets 13, or otherwise, to the end of the belt B, and said tool may be made of a single sheet of brass, steel or other material. The ends of the body portion 11 may extend

inward, as at 14 and 15, to provide a space 16 and 17 between said ends into which the end of the belt to be laced is adapted to fit.

The ends are curved at 16^a and 17^a respectively, and the body, in end view, is substantially S-shaped in form. The ends 16^a and 17^a of the tool have angularly arranged guides 18 for the lacing and said guides are spaced to provide slots or spaces 19. These guides, as well as the spaces 19 are substantially V-shaped when viewed in plan, and one arm, as 20, of each of the guides in the body portion is at an angle with respect to the arm 21 on the intumed parts 14 and 15. The entire tool may be cast or otherwise formed instead of being made of sheet metal, and the slots and guides in the end 16 are oppositely arranged to the guides and slots in the end 17, so that when the lacing is properly made they will be disposed with relation to each other as shown best in Fig. 4. The guides 18 in the ends of the tool are substantially V-shaped in edge view, and form loops to cause the wire while making the lacing to assume a helical form.

A mandrel 22 is placed between the inner surface 23 of the guides 18, and this mandrel is used to form the ends of the lacing and to determine the distance the lacing is to project beyond the end of the belt, though when the lacing is made on wide belts, I may prefer to use at least two mandrels which may be D-shaped in order to be easily withdrawn and avoid pulling the lacing out of its proper shape, and to keep two or more mandrels in position they may be fastened at one or both ends by means of pins or any other suitable means. By making the tool on the form shown, the said tool is adapted to be shifted transversely of the belt where wide ones are to be laced without removing the mandrel, and when the lacing is started, it is of course understood that the end of the wire is fastened in any suitable way and after the lacing has been made the end of the wire is also fastened in the belt end.

When the two ends of the belt have been laced by the tool and the ends of the lacing properly fastened to the belt ends, the said ends may be brought together and a rod or joining member 24 may be passed between the interlocked ends held as best shown in Fig. 4.

To permit the tool to be used as a square for trimming the ends of belts or for other

purposes, I make the sides or edges 25 straight and at right angles to the inner surface 23, or the outer surface thereof according to the way it is used, so that if the
5 tool is placed over the side edge of the belt the sides of the tool 25 will extend at right angles to permit the ends of the belt to be squared.

From the foregoing it will be seen that a
10 simple and efficient tool or device is provided which is adapted for use as a square or to be employed for forming metallic lacing on the ends of belts; that said tool is simple in construction and may be readily applied to
15 the belt in position for lacing purposes; that said tool may be made of a single piece of metal and has its ends so formed that both ends of the belt may be laced properly, and that said tool may be used for lacing
20 belts much wider than the tool itself.

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

1. A tool of the character described, comprising a body portion having its ends provided with oppositely and inwardly extending parts, and with angularly disposed guides forming spaces between the same.

2. A tool of the character described, comprising a body portion having an end provided with an inwardly extending part, and with angularly disposed guides forming spaces between the same.

3. A tool of the character described, comprising a body portion having an end provided with an inwardly extending part spaced from said body portion for the end of the belt to be laced, and with angularly arranged guides spaced apart and forming
40 loops at the end for a mandrel to be seated between the body portion and said extending part, the part of the guides on the extending part being at an angle with respect to the part on the body portion.

4. A tool of the character described, comprising a substantially rectangular body portion having its ends provided with oppositely and inwardly extending parts, and with angularly disposed guides spaced apart
50 and forming loops at said ends, the guides of one end being oppositely arranged with respect to the other and the parts of the guides in the body portion being at an angle to the parts in the inwardly extending parts.

5. A tool of the character described, comprising

a substantially rectangular and S-shaped body having angularly disposed guides arranged in the ends thereof.

6. A tool of the character described, comprising a substantially S-shaped body portion having angularly and oppositely disposed spaced guides arranged in the ends thereof.

7. A belt lacing tool having its body portion provided with guides at one end which
65 are spaced apart so as to form loops for the reception of a mandrel and the end of the belt to be laced.

8. A tool of the character described, comprising a body portion having an end provided with an inwardly extending part and angularly disposed guides in said end, the said body portion having an edge at right angles to the inwardly turned part to adapt the same to be employed as a square.

9. A tool of the character described, comprising a body portion having its ends provided with inwardly extending parts and angularly disposed guides forming loops in said ends, the said body portion having its
80 edges at right angles to the inwardly turned parts to adapt the same to be employed as a square.

10. A tool of the character described, comprising a body portion having its ends substantially U-shaped in which the end of a belt is adapted to be inserted and forming a space in which a mandrel may be readily inserted and removed, said ends being provided with substantially U-shaped and
90 spaced guides for the lacing and extending entirely through said ends of the tool.

11. A tool of the character described, comprising a body portion having its ends substantially U-shaped in which the end of a
95 belt is adapted to be inserted and forming a space in which a mandrel may be readily inserted and removed, said ends being provided with substantially U-shaped and spaced guides for the lacing, said guides extending entirely through said ends of the tool and angularly arranged with respect to said ends.

This specification signed and witnessed this 15th day of December A. D. 1908.

HARRY THOMAS MUMFORD.

Witnesses:

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