

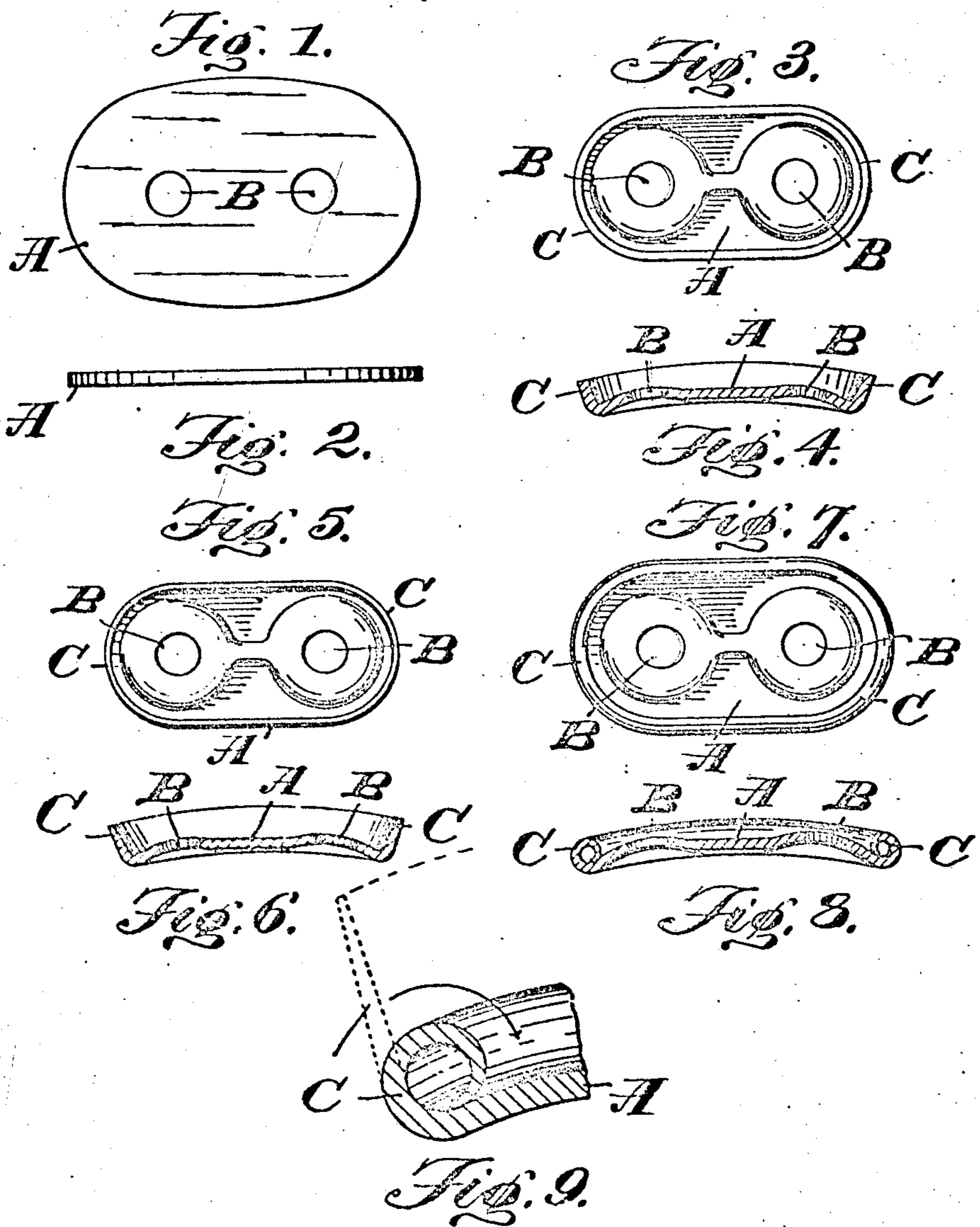
No. 895,424.

PATENTED AUG. 11, 1908.

G. F. BULL & I. JACKSON.

BELT FASTENER PLATE HAVING BEADED OR ROLLED EDGES.

APPLICATION FILED OCT. 26, 1906.



Witnesses  
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# UNITED STATES PATENT OFFICE.

GEORGE FREDERICK BULL, OF BIRMINGHAM, AND ISAAC JACKSON, OF GLOSSOP,  
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BELT-FASTENER PLATE HAVING BEADED OR ROLLED EDGES.

No. 895,424.

Specification of Letters Patent.

Patented Aug. 11, 1908.

Application filed October 26, 1906. Serial No. 340,758.

*To all whom it may concern:*

Be it known that I, GEORGE FREDERICK BULL, a resident of Birmingham, in the county of Warwick, England, and ISAAC JACKSON, a resident of Glossop, in the county of Derby, England, both subjects of the King of Great Britain and Ireland, have invented new and useful Improvements in Belt-Fastener Plates Having Beaded or Rolled Edges, of which the following is a specification.

These improvements relate to beaded or rolled edge belt fastener plates and the object of the invention is to provide such a plate which shall have the surrounding edge or edges completely or more than completely rolled or turned over on itself or themselves.

A complete or more than complete convolution of the surrounding edge of a metal plate has not, before this, been attainable by the use of ordinary dies or stamping tools, but we are enabled by our invention to produce a plate with a perfect and beautiful beaded edge and in a very simple manner. We effect this by thinning or tapering the edge of the plate at some suitable stage in the process of manufacture, the thus thinned or tapered edge, owing to its being less stiff than the remainder of the plate, readily adapting itself to the varying diameters or lengths of periphery through which it passes in the process of curling over, without in any way distorting or crumpling itself or any other part of the plate. According to the previous methods of beading such plates the edge has remained at its original thickness and inferior results have been attained.

The accompanying drawings illustrate a plate for use in a machine driving belt fastener produced according to this invention. The tools or dies by which the different forms of the plate at different stages of manufacture are produced are of the customary construction to effect their purpose, as is well understood in the art of metal stamping and pressing, and they are, therefore, not here illustrated.

In the accompanying drawings, Figures 1 and 2 show in plan and edge elevation the flat blank of the fastening plate; Figs. 3 and 4 show in plan and longitudinal section the plate in the second stage of its manufacture; Figs. 5 and 6 similarly illustrate the plate in a further stage of manufacture; Figs. 7 and 8 similarly illustrate the completed plate; and

Fig. 9 illustrates to a larger scale a sectional view of part of the completed improved edge.

As shown in Figs. 1 and 2, A is the metallic blank stamped out in the flat and formed with holes B for the passage of screws or equivalents for use when the plate is used in a belt fastener.

As illustrated in Figs. 3 and 4, the plate in the second stage of its manufacture has its edge turned up as at C approximately at an angle of about 90° to the original plane of the blank. The amount turned up depends on the extent to which the edge is to be subsequently curled or turned over. In the particular plate described the parts surrounding the bolt holes are also in this stage pressed to form concavities surrounding the bolt holes in the lower face of the plate, and a corrugation or ridge is also formed between and connecting the concavities.

In the next stage of the process the turned wall C of the plate is rendered thinner or tapered towards its edge as illustrated in Figs. 5 and 6.

In the next and final stage of the process the result of which is shown in Figs. 7 and 8 the turned up tapered edge is rolled over between suitable dies to form a complete bead, the die against which the reduced edge of the flange comes being suitably carried to turn over and guide the edge.

In Fig. 9 is illustrated the path followed by the edge in the production of the roll.

The different stages in the production of a plate may be varied from those described and illustrated, and the tapering of the edge may be accomplished at a stage before the complete turning up of the wall shown in Figs. 3 and 4, or during such turning up, but it is preferably accomplished subsequently thereto as herein described.

Although this invention is particularly applicable to plates or stampings in which the whole of the edge is to be curved over in a complete or more than complete convolution, it is also applicable for the more perfect production of plates in which the edge is not curved as far as a complete convolution and also to a curved or beaded edge which does not completely extend around the plate or article.

The tapering or reduction of the up-turned edge is preferably accomplished by a male die or punch with a tapered outer surface fitting

within the up-turned wall forcing the blank forward in a female die, the walls of which are proportioned and tapered relatively to the male die to produce the required effect.

5 No claim is herein made to the novel process or method hereinbefore described as that will form the subject-matter of a divisional application.

What is claimed, and desired to be secured by Letters Patent, is—

10 1. A beaded metallic belt fastener plate produced by stamping or pressing, the inwardly rolled bead of which consists of a part of the plate which has been tapered or  
15 thinned towards the edge, substantially as hereinbefore described and as illustrated by the drawings.

2. A beaded metallic belt fastener plate produced by stamping or pressing, and  
20 which plate is formed with a bolt hole or with bolt holes or the like, a concavity sur-

rounding each such bolt hole or bolt holes, and an inwardly rolled bead which consists of a part of the plate which has been tapered or thinned towards the edge, substantially  
25 as hereinbefore described and as illustrated by the drawings.

3. A metal belt fastener plate having a bead formed from a part of the plate which has been tapered or thinned towards the  
30 edge and turned or rolled to bring such thinned edge into contact with the body of the plate.

In testimony whereof we have signed our names to this specification in the presence of  
35 two subscribing witnesses.

GEORGE FREDERICK BULL.  
ISAAC JACKSON.

Witnesses:

JAMES MARTIN JACKSON,  
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