

(No Model.)

L. O. DION.

RIVET.

No. 412,243.

Patented Oct. 8, 1889.

Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.



Fig. 6.



Fig. 8.



Fig. 7.



Witnesses.

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UNITED STATES PATENT OFFICE.

LÉON O. DION, OF NATICK, MASSACHUSETTS.

RIVET.

SPECIFICATION forming part of Letters Patent No. 412,243, dated October 8, 1889.

Application filed September 7, 1888. Serial No. 284,805. (No model.)

To all whom it may concern:

Be it known that I, LÉON O. DION, of Natick, county of Middlesex, State of Massachusetts, have invented an Improvement in Rivets, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a novel rivet—one capable of being upset at both ends after being inserted into the stock, so as to present large flange-like heads.

My invention consists in a rivet having a contracted waist or body and countersunk or recessed at its opposite ends, so as to be readily upset and form enlarged heads.

Figure 1 represents a piece of wire or metal supposed to be of sufficient length to form a single rivet. Fig. 2 represents a rivet made from the said piece of wire or metal. Fig. 3 is a longitudinal section of the rivet shown in Fig. 2. Fig. 4 represents the rivet as upset and having a flat head. Fig. 5 is a longitudinal section of the rivet shown in Fig. 4. Fig. 6 shows the rivet upset to form conical heads, and Figs. 7 and 8 are respectively a side view and a longitudinal section of a modified form of rivet.

In the production of my improved rivet I may take a piece of wire or metal, as *a*, of proper length for a blank for a rivet, and place it between the V-shaped peripheries of two rolls of the class employed for rolling cylindrical surfaces of varying contour from end to end, rolls of the class referred to being represented in United States Patent No. 350,906. Preferably the ends of the blank will have pressed against them the ends of pointed rods, and as the V-shaped peripheries of the rolls gradually advance into the peripheries of the blank to form the waist *b* the portions of the blank at each side the parts of the rolls enter-

ing the blank act to force parts of the blank toward its opposite ends to form enlarged hollow or cup-shaped or conical ends 2 2. 45

The described rivet, when forced through or into the stock or pieces of leather to be united by it, will be subjected to pressure between dies, and the enlarged ends 2 having the recesses will, in being upset, flare outwardly and lie down closely against the stock to present large heads, as 3, (see Figs. 4, 5, and 6,) the said heads being flat externally or convexed more or less, according to the particular shape of the die used to upset the rivet 55 and secure it in the stock.

As will be noticed, by comparing Figs. 2 and 3 with Figs. 4, 5, and 6, the waist *b* in Figs. 2 and 3, between the conical or enlarged portions 2 2 toward the end of the rivet, is of less diameter than the body or shank of the rivet when upset in the stock. This upsetting of the rivet and expanding its body at what was the waist of the rivet helps fill up the hole made in the stock for the reception 65 of the rivet.

In Figs. 7 and 8 I have shown the body of the rivet as having two depressions or waists.

I claim—

1. The herein-described rivet, it having its opposite ends recessed, substantially as described. 70

2. The herein-described rivet, it having a waist of small diameter, as *b*, and having its ends enlarged in diameter and recessed, so that both the said ends may be readily upset to form large heads, substantially as described. 75

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LÉON O. DION.

Witnesses:

G. W. GREGORY,
HOWARD F. EATON.