

(No Model.)

J. L. HALL.

RIVET.

No. 353,357.

Patented Nov. 30, 1886.

FIG. 5.

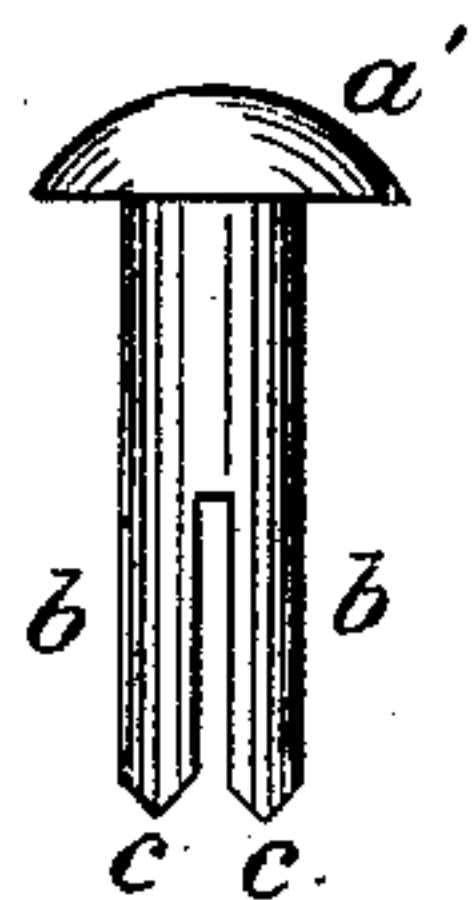


FIG. 1.

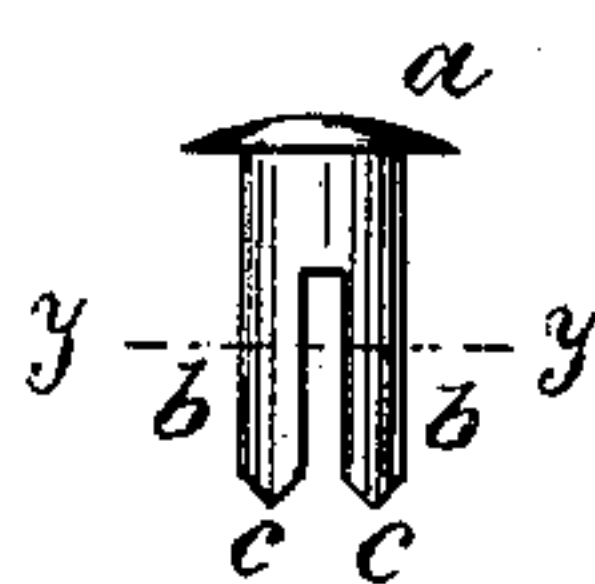


FIG. 6.

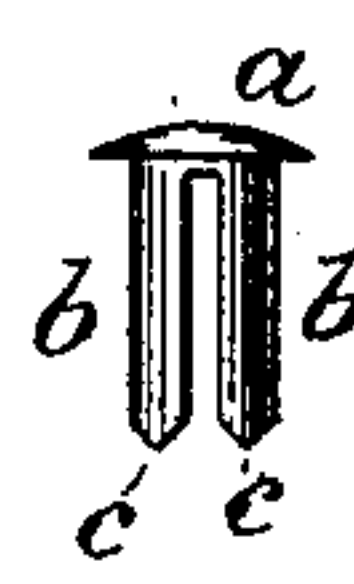


FIG. 2.



FIG. 4.

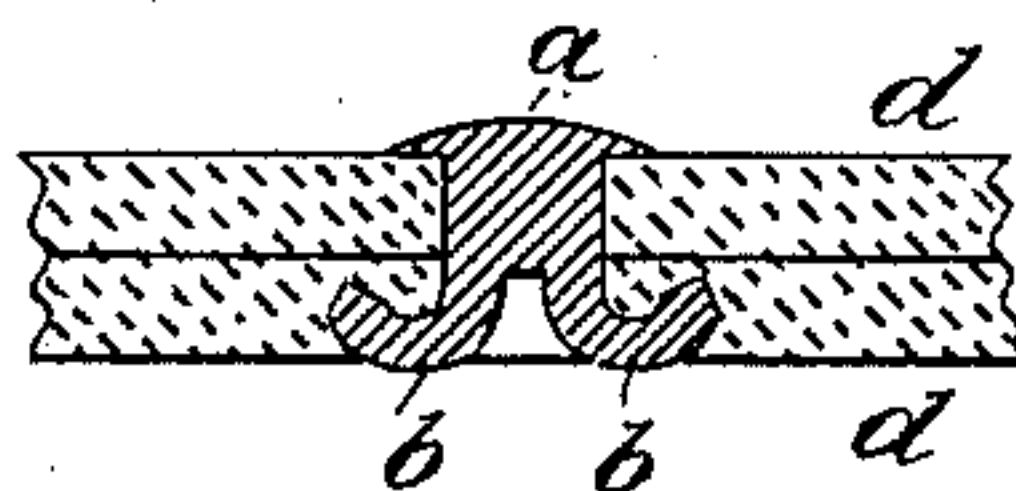


FIG. 3.

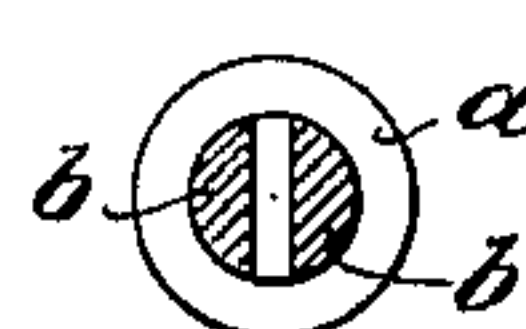


FIG. 7. FIG. 8.

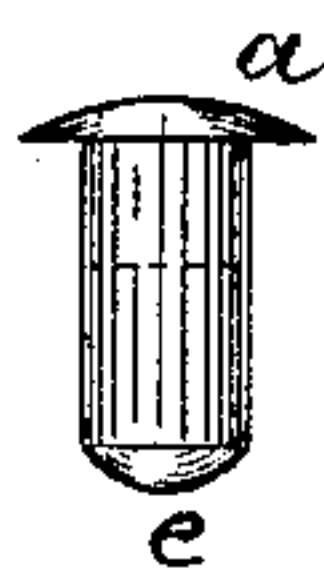
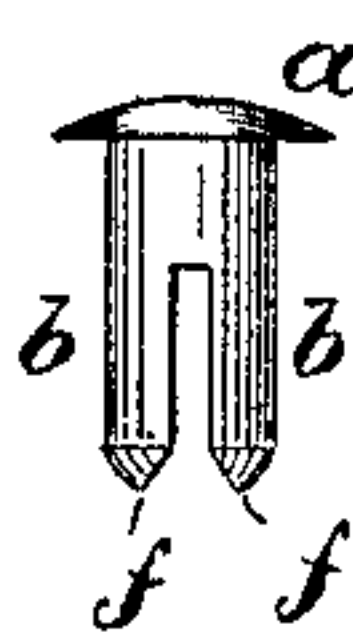


FIG. 10. FIG. 12.

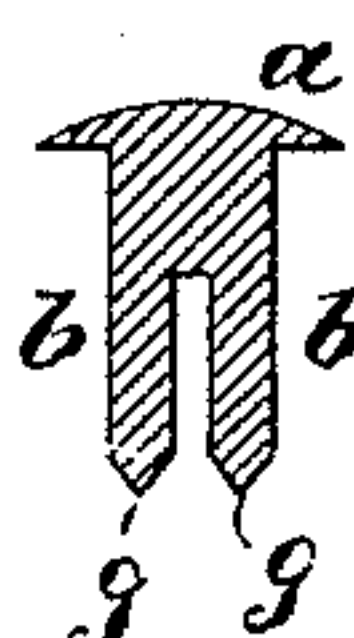
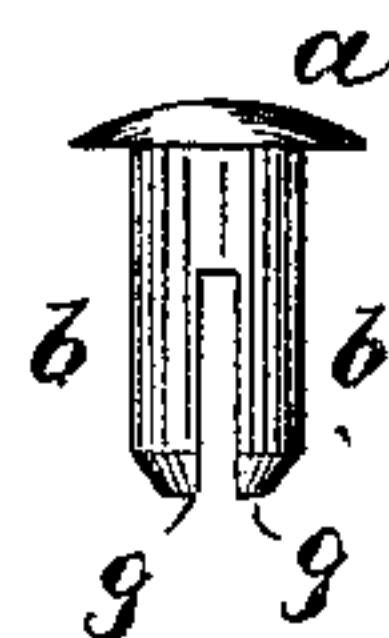
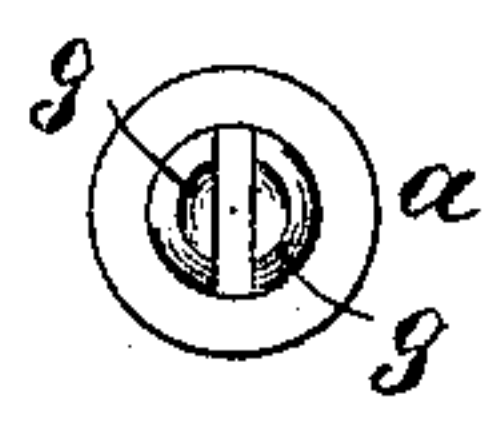


FIG. 9.



FIG. 11.



Witnesses.

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RIVET.

SPECIFICATION forming part of Letters Patent No. 353,357, dated November 30, 1886.

Application filed August 7, 1886. Serial No. 210,323. (No model.)

To all whom it may concern:

Be it known that I, JAMES L. HALL, a citizen of the United States, residing at Kingston, in the county of Plymouth and State of Massachusetts, have invented a new and useful Improvement in Rivets, of which the following is a specification.

My invention relates to an improvement in that class of rivets in which the shank is divided to form two prongs that are caused to clinch at the ends after having been driven through the leather or other article to which they are applied. By means of my improvement the rivet can be very readily driven into and through the article without first punching a hole to receive it.

The nature of my invention consists of a cylindrical slotted rivet having the outer sides of the prongs concentric with the shank, and the sides made flat and parallel with each other. The inner and outer ends of the prongs are each beveled to a central edge, so that the rivet may be readily driven into and through the leather or other material without the prongs spreading apart or being forced together until the points meet the anvil by which the prongs are spread apart and clinched on the opposite side of the material.

My invention is illustrated in the accompanying drawings, in which Figure 1 is a view, on an enlarged scale, of a rivet made according to my invention. Fig. 2 is a bottom or end view of the same. Fig. 3 is a cross-section on line *yy* of Fig. 1. Fig. 4 shows the rivet driven through and clinched to the leather pieces *d d*. Fig. 5 is an enlarged view showing a rivet with a rounded head. Fig. 6 shows the slot extending the entire length of the shank. Figs. 7, 8, 9 represent a rivet in which the end of the solid shank is rounded before being slotted; and Figs. 10, 11, 12, the same having the inner ends of the prongs curved.

a is the head of the rivet.

b b are the prongs, the outer sides of which are curved and made concentric with the head and body of the shank. The inner sides of the prongs are flat and parallel with each other, and the ends of the same, *c c*, are beveled on both sides to a central edge, so as to form sharp cutting-edges, as shown.

In carrying out my invention I take a rivet

made from round metal or wire and mill out a narrow central slot, taking out as little metal as possible. The narrower the slot the smaller the shank of the solid rivet may be to start with; consequently the less labor and waste in making the rivet of any required strength. At the same time the ends of the prongs are beveled on both sides, all of which may be done at one operation by a machine adapted to the purpose. This rivet may also be made by first forming a bevel on the end of the shank of the solid rivet, which can be done in the die in which the solid rivet is made, or by milling its end to a round or other shape after the solid rivet is made, and then milling out the central slot and bevels of the inner faces of the prongs.

A rivet with a rounded end which is beveled in circular form can be made at less cost than one made by beveling both ends of the prongs by milling them simultaneously with the slotting, as there is but half as much milling to do on the prongs, while the rounded beveled ends facilitate its use, especially in places where a hole must be punched in certain work where a setting-machine cannot be used—as in the manufacture of trunks, where the rivets must be clinched by means of a hand-lever and suitable anvil.

In Figs. 1 to 6 the end of the solid rivet before being slotted is made flat, and the ends of the prongs, when beveled, present a sharp central and straight cutting-edge. In Figs. 7, 8, 9 the end of the solid shank is rounded, as shown at *e*, Fig. 8, so that when the slot is made and the ends beveled they will present a curved cutting-edge, as at *f f*, Figs. 7 and 9. In Figs. 10, 11, 12 the edges *g*, besides being beveled, as in the other figures, are curved on their inner sides, as indicated in Fig. 11. The same principle is involved in all these cases—viz., that of beveling the ends of the prongs to a sharp central cutting-edge.

By constructing a rivet as above described the prongs are sufficiently rigid to enable the rivet to be readily driven into and through the material without the necessity of previously punching a hole in the same, and the prongs will not diverge and spread outwardly or be forced inwardly, but will pass directly through the material and without change of direction

until the face of the anvil is reached, when they will be turned in an outward and upward direction, and by reason of their beveled ends re-enter the material readily and clinch. The pressure brought to bear upon the rivet in setting causes the bend of the prongs to settle into the leather or other soft material, making flush work, the rigidity of the prongs causing them to remain as set and not to spring back when the pressure is released.

I am aware that rivets have been made in which the ends of the prongs are beveled on the outer sides, and also those beveled on the inner sides, so as to cause the prongs to spread outwardly or contract inwardly on being driven into the material, and also that the prongs have been tapered throughout their entire length when made flat-sided, and that they have been made both flat and round sided with blunt ends; but in my invention I produce a new article, which combines the greatest strength possible to be obtained with the most practical form for its intended use, and which can be produced at a greatly-reduced cost.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A rivet consisting of a head, *a*, a cylindrical shank, and prongs *b b*, having their outer sides concentric with the shank and head, and with flat inner sides parallel with each other, and having their ends beveled on both sides to a cutting-edge, substantially as shown and described.

2. A rivet having prongs beveled on both sides at their ends when made from a solid shank having a flat end to form straight cutting-edges, as set forth.

3. A rivet having prongs beveled on both sides at their ends when made from a solid shank having a rounded edge to form curved cutting-edges, as set forth.

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

JAMES L. HALL.

Witnesses:

J. H. ADAMS,

WM. A. WHEELER.