(No Model.)

H. H. CUMMINGS.

MANUFACTURE OF HOLLOW RIVETS.

No. 414,755. Patented Nov. 12, 1889.

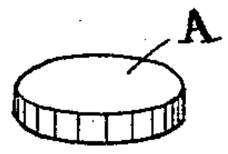

Fig. 1

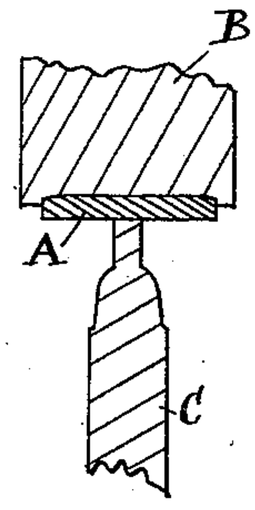

Fig. 2.

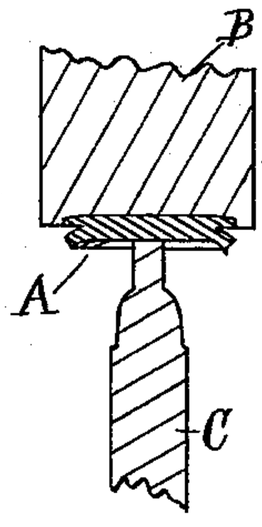

Fig. 3.

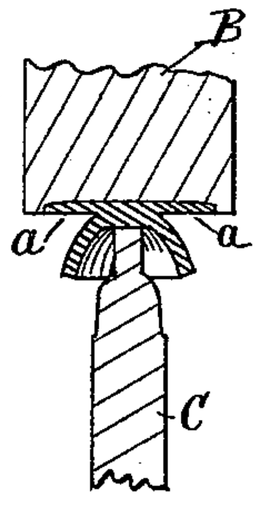

Fig. 4.

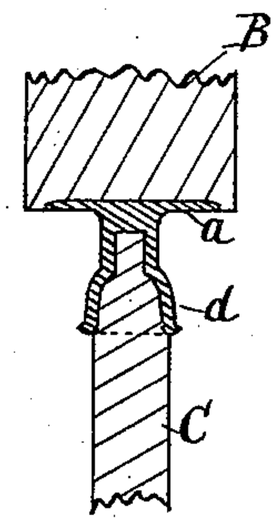

Fig. 5.

Fig. 6.

Witnesses:
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UNITED STATES PATENT OFFICE.

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MANUFACTURE OF HOLLOW RIVETS.

SPECIFICATION forming part of Letters Patent No. 414,755, dated November 12, 1889.

Application filed July 20, 1888. Serial No. 280,565. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. CUMMINGS, a citizen of the United States, residing at Malden, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in the Method of Manufacturing Hollow Rivets, whereby they may be produced symmetrical or true in form and of such ductility that the hollow point of the rivet may be spread out without breaking or splitting when being set in fabrics, leather, &c., of which the following is a specification.

Heretofore headed rivets having hollow points have been produced from wire of substantially the diameter of the smaller diameter of the shank or body of the rivet, the said wire being upset at one end to form the head, the hollow point and body being formed by boring into or piercing the end of the wire with a suitably-shaped point and, if desired, spreading the metal into a mold or form.

In making rivets by the foregoing method it is very difficult to make the hollow part of the rivet in the center of the shank, and the spreading of the wire to enlarge the hollow point so stretches the metal that when the rivet is yet farther stretched, as when setting or clinching the same, the metal is liable to crack and split, thus making imperfect work.

In accordance with my invention the metal in the hollow body of the rivet is not stretched outwardly, but, on the contrary, the hollow body and point of the rivet is produced by cutting partially into the periphery of a blank, leaving a part to form a head, while the remaining part of the blank is turned over outwardly, or away from the head, and elongated and shaped to constitute a hollow body and point.

My invention in the method of forming headed hollow-pointed rivets therefore consists, essentially, in cutting partially into the periphery of a blank to leave a portion to form a head, and thereafter overturning another portion of the said blank to leave a hollow body and point.

Figure 1, in perspective, shows a form of slug or blank from which my improved rivet is made. Fig. 2, in vertical section, represents the blank as held between a chuck and an anvil, ready to be acted upon to form a rivet. Figs. 3, 4, and 5 are like views showing the blank in different stages of manufacture, and Fig. 6 represents a hollow rivet of a form which may be made by my method.

Like letters are used to designate like parts.

The blank A is a disk of metal of a diameter substantially equal to the diameter desired for the head of the rivet. This blank is shown as placed between a chuck or support B, while the other side of the blank is shown as acted upon by a holder or anvil C, and while held in this or in other suitable manner the edge or periphery of the blank or piece of metal to form the rivet is cut into all around, as in Fig. 3, until the cut is deep enough to form the under side of the flange or head, as at *a*, (see Figs. 4, 5, and 6,) the portion of the blank at one side of the said cut being overturned by a suitable tool, or forced outwardly or elongated in a direction away from the head to leave a hollow body and point, the form of the anvil or holder C determining, in a measure, the shape of the hole or opening left in the body and point of the rivet, the outside thereof from the flange or head *a* being formed by the devices employed for overturning the metal of the blank when making the body and point.

The manipulation of the metal whereby the hollow or cup end of the rivet is formed is a metal-spinning process, and confers on the completed article all the advantages that are afforded by spinning in contradistinction to spreading or upsetting by piercing the blank, as heretofore.

I claim—

The method of forming headed hollow-pointed rivets, consisting in cutting partially into the periphery of a metal blank to leave a portion thereof to form a head, and thereafter overturning another portion of the said blank to leave a hollow point, substantially as described.

HENRY H. CUMMINGS.

Witnesses:

JOHN D. STRICKLER,

FRED L. CUMMINGS.