(No Model.)

W. A. WILSON.

RIVET SET.

No. 446,048. Patented Feb. 10, 1891.

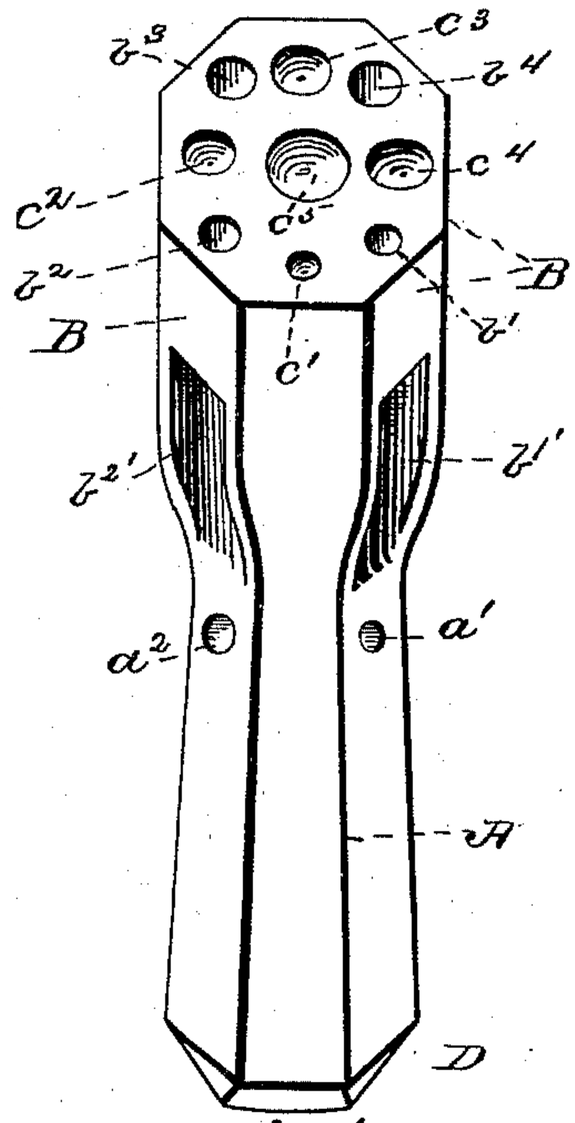

Fig. 1.

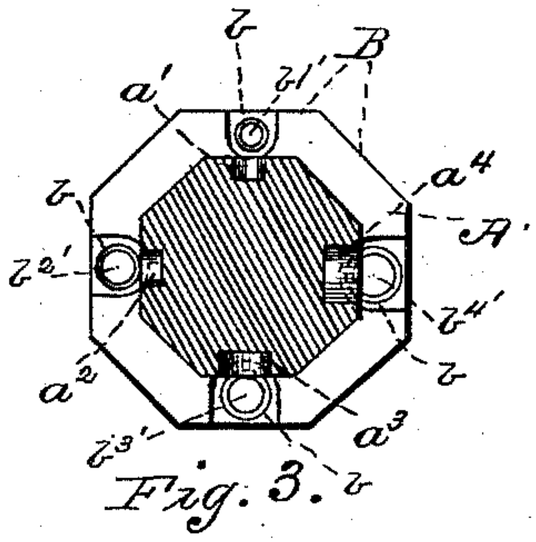

Fig. 3.

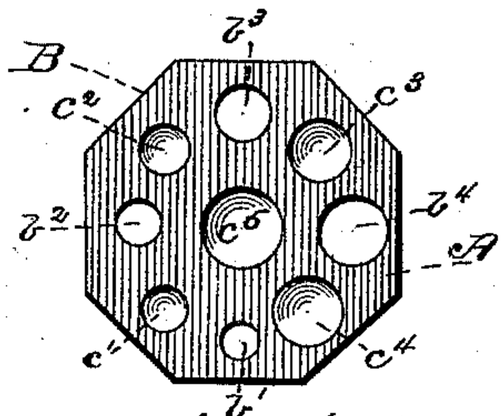

Fig. 4.

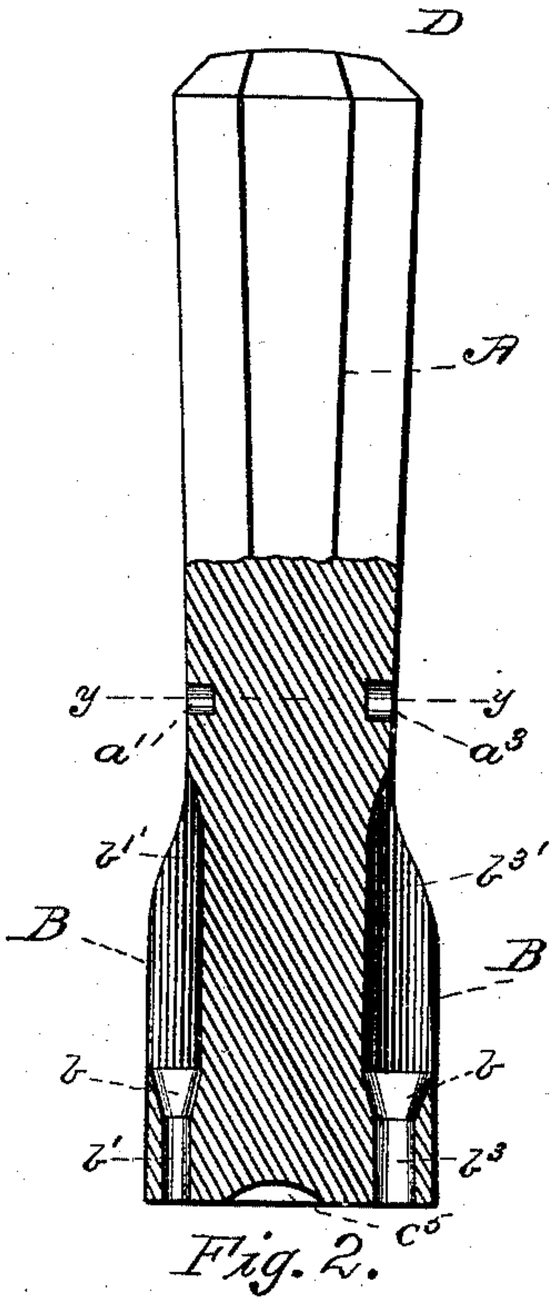

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM A. WILSON, OF NACOGDOCHES, TEXAS.

RIVET-SET.

SPECIFICATION forming part of Letters Patent No. 446,048, dated February 10, 1891.

Application filed October 22, 1890. Serial No. 368,898. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. WILSON, a citizen of the United States, residing at Nacogdoches, in the county of Nacogdoches and State of Texas, have invented certain new and useful Improvements in Rivet-Sets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to tools for rivet cutting and setting, and is intended to supply the need for a combination guide and set for rivets, adaptable for various sizes of rivets and for hand or machine riveting.

Reference is had to the accompanying drawings, wherein the same parts are indicated by the same letters.

Figure 1 represents a perspective view of my device for riveting by hand. Fig. 2 represents a profile view of the same, the lower part being shown in section along the line $x\ x$, Fig. 1. Fig. 3 represents a cross-section of my device made by the plane $y\ y$, Fig. 2. Fig. 4 represents a plan view of the end B of my improved tool.

A represents the body of my improved rivet-set. B represents the flat face at one end thereof, and D the rounded handle at the other. When the set is to be made for machine-riveting, D will be replaced by a suitable tang for inserting in any convenient holder.

The face B is indented with the graduated cavities for upsetting rivet-heads c', c^2, c^3, c^4, and c^5. The cavity in the center being somewhat larger than the others is also made comparatively shallow, so that it may be used in upsetting the heads for various sizes of rivets. Situated between these indentations I have graduated perforations b', b^2, b^3, and b^4, each cylindrical for a short distance and then expanding conically, as at b, before opening into its U-shaped open score $b^{1\prime}$, $b^{2\prime}$, $b^{3\prime}$, and $b^{4\prime}$, respectively. The conical enlargements are to prevent the choking of the holes by the burrs in rivet-punching, and the rectangular open scores are to allow the burrs an easy exit.

The head of the rivet-set is made tapering slightly to give greater strength.

a', a^2, a^3, and a^4 are small shallow holes used as a gage for the rivets. They are of the same size as the corresponding hole in the face B, and by examining the side hole the workman may judge of the size of the hole for the rivet without looking at the face B. This is specially important in machine-riveting.

To use my improved rivet-set, a hole slightly larger than the rivet is held firmly by hand or machinery immediately over the rivet as it is being forced through. The edges of the cylindrical holes shear the plate and the burrs are forced up into the cylindrical holes. Where very thin metal is used there may be several of these burrs gathered in the cylindrical holes before they are forced out through the conical enlargement b and the rectangular open scores. The rivet-set is now turned forty-five degrees to the left, when the proper cavity for upsetting the head will be over the rivet, and the rivet-head is pressed or hammered into shape.

In machine-riveting I do not use the center cavity, and I have the holder to my rivet-set so adjusted that the centers of the various holes and outer cavities are on the circumference of the imaginary circle made by the center of the rivet or punch on the lower face of the rivet-set, and I use any convenient centering device for turning the rivet either in punching the holes or upsetting the heads.

I have shown a rivet-set having an octagonal head with the holes and cavities set near the centers of the sides of the octagon; but I may place the holes and cavities at the angles of the octagon, or I may use any regular polygon having a hole or a cavity for each side or angle thereof. By making the polygon large with many sides it may be readily seen that the scope of my rivet-set may be greatly enlarged.

My rivet-set is preferably made of steel chilled or hardened at the end B.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A rivet-set composed of a steel body having a handle or tang for hand or machine use and a plurality of graduated holes, and a plurality of graduated cavities in the lower face, substantially as described.

2. A rivet-set composed of a polygonal-

shaped steel body having a handle or tang for hand or machine use and a plurality of graduated holes, and a plurality of graduated cavities set symmetrically in the flat lower face, substantially as described.

3. In a rivet-set having a polygonal-shaped steel body, the combination of a flat face perforated with a plurality of holes and indented with a plurality of cavities symmetrically arranged in the said face with a countersunk rivet-gage above and corresponding to each hole, substantially as described.

4. In a rivet-set having a polygonal-shaped steel body, the combination of a flat face indented with a plurality of cavities and perforated with a plurality of holes, said holes and cavities being symmetrically arranged in the said face, and said holes being cylindrical for a short distance, then opening into truncated conical chambers, and then into U-shaped open slots with a countersunk rivet-gage above each rectangular slot and corresponding to each hole, substantially as described.

5. In a rivet-set having an octagonal-shaped curved steel body with tapering shank and head, the combination of a flat face indented with a plurality of cavities and perforated with a plurality of holes, said holes and cavities being symmetrically arranged in the said face, and said holes being cylindrical for a short distance, then opening into truncated conical chambers, and then into U-shaped open slots with a countersunk rivet-gage above each rectangular slot and corresponding to each hole, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM A. WILSON.

Witnesses:
BIRTON CLARK,
W. E. MAYES.