

No. 810,007.

PATENTED JAN. 16, 1906.

W. S. WARD.
METHOD OF MAKING CLEVIS IRONS.
APPLICATION FILED JUNE 10, 1905.

Fig. 1

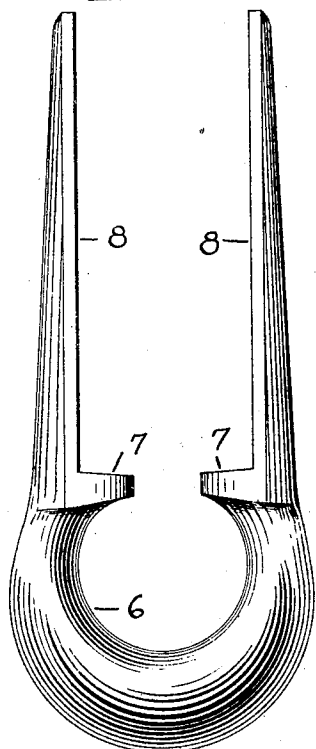


Fig. 2

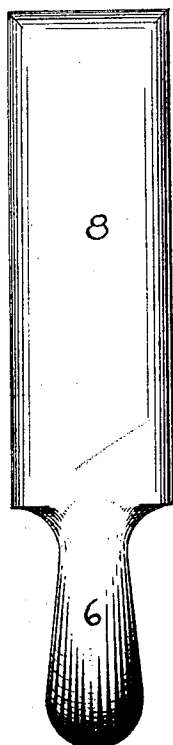


Fig. 3

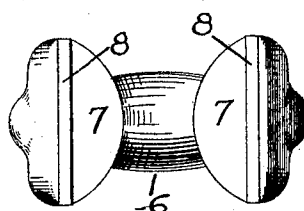


Fig. 4

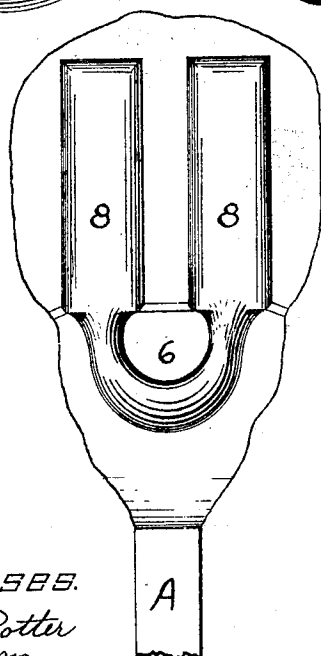
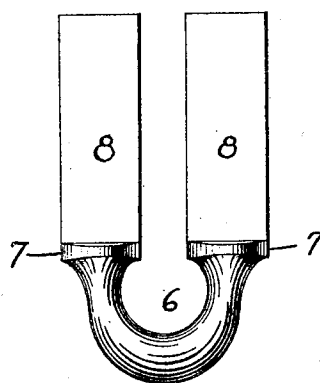


Fig. 5



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM S. WARD, OF PLANTSVILLE, CONNECTICUT, ASSIGNOR TO THE
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METHOD OF MAKING CLEVIS-IRONS.

No. 810,007.

Specification of Letters Patent.

Patented Jan. 16, 1906.

Application filed June 10, 1905. Serial No. 264,743.

To all whom it may concern:

Be it known that I, WILLIAM S. WARD, a citizen of the United States, residing at Plantsville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Methods of Making Clevis-Irons, of which the following is a specification.

My invention has relation to clevises formed by drop-forging, and in such connection relates to the method of forming the principal member of the clevis, which member is in shop parlance called the "clevis-iron."

The objects of my improvement are economy, uniformity, and neatness in production.

In the accompanying drawings, Figure 1 is a side view of the clevis-iron. Fig. 2 is an edge view of the same. Fig. 3 is an end view looking toward the ends of the blades. Fig. 4 is a reduced side view of the blank which is the result of the first step in my method of making the clevis-iron. Fig. 5 is a view of the blank which is the result of the second step in the method, showing the reverse side of the blank from that shown in Fig. 4.

The clevis-iron shown in Figs. 1, 2, and 3 consists of an eye 6, lugs 7, and blades 8 and is designed for whiffletrees of heavy wagons. No novelty is claimed for the form of the finished iron, as shown in the said Figs. 1, 2, and 3. Clevis-irons of this type have been heretofore produced in various ways. One way has been to drop-forge them by striking the eye flatwise and the blades edgewise in dies and then dressing out the inner faces of the blades to remove the material that must be left to give the dies the proper draft. Another way has been to drop-forge the blades on the ends of the eye portion by striking the blades flatwise while the eye portion was straightened out, more or less, and then subsequently bending the eye portion to bring the blades and eye to their proper form. The first method is hard to forge and difficult to dress, and by the second method it is very difficult to make the eye of good form and to bring the lugs 7 squarely opposite each other.

By reference to Figs. 1 and 2 it will be seen that when the eye portion stands so as to present a side view the blades stand so as to pre-

sent an edge view. In my method I form the dies with recesses for the blades and eye all in side view, whereby a square bar of iron A, Fig. 4, when properly heated and subjected to the dies will produce the blank shown in the said Fig. 4, in which the two blades 8 8 are substantially in the plane of the eye and of the fin or web 9, that is formed between the faces of the two dies. This makes a form that is easy to forge and can be made by a single pair of dies and is easy to trim. It may, however, be economy to use two pair of dies, one for doing most of the work and the other for giving the final stroke in order to prevent the too-rapid wearing away of the dies. In either case the blank, Fig. 4, represents what is practically the result of the first step in the method of making the irons. This blank is then subjected to a trimming-die and punch the contour of which corresponds to that of the blades and eye, as shown in the said Fig. 4 and in Fig. 5, the latter figure illustrating the result of the second step. The trimming is preferably done immediately after striking in the dies and while the blank is still hot. Immediately after trimming, the iron being still hot, the eye is held by any suitable implement and the blades taken hold of one by one by suitable tongs or the like and turned one-quarter of a revolution, twisting the iron at its smallest diameter in the eye portion to bring the blades into their proper and final position, thereby changing the blank, Fig. 5, into the final form, as shown in Figs. 1, 2, and 3. This leaves the article in perfect shape both as to the form of the eye and the blades, and with both lugs standing in the same plane.

I claim as my invention—

The herein-described method of producing clevis-irons which consists in striking up a blank from a bar of iron by drop-forging in dies, with the blades and eye all substantially in one plane, then trimming off the fin or surplus metal and finally twisting the iron of the eye portion at its smaller diameter to bring the blades into their proper position.

WILLIAM S. WARD.

Witnesses:

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