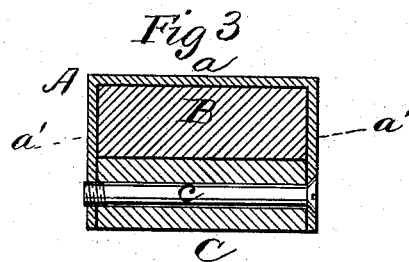
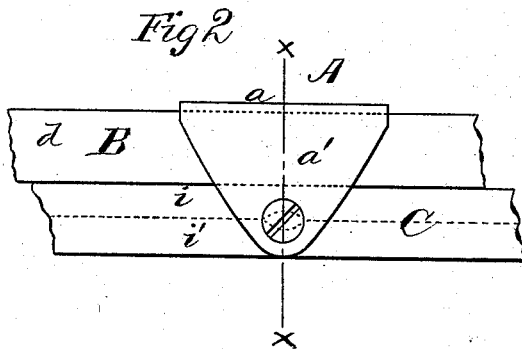
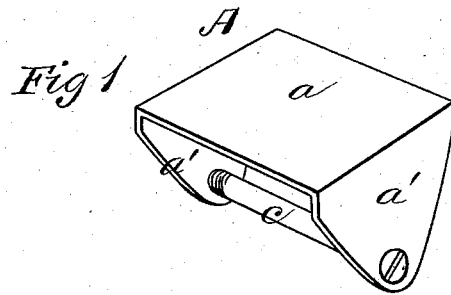


E. A. FORMAN.  
Harness-Loop.

No. 214,815.

Patented April 29, 1879.



WITNESSES

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# UNITED STATES PATENT OFFICE.

EDWIN A. FORMAN, OF LOWELL, MICHIGAN.

## IMPROVEMENT IN HARNESS-LOOPS.

Specification forming part of Letters Patent No. **214,815**, dated April 29, 1879; application filed August 4, 1877.

*To all whom it may concern:*

Be it known that I, EDWIN A. FORMAN, of Lowell, in the county of Kent and State of Michigan, have invented a new and valuable Improvement in Harness-Loops; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of my improved harness-loop. Fig. 2 is a side view thereof applied; and Fig. 3 is a sectional view thereof, taken through the line *x x*, Fig. 2.

This invention has relation to improvements in loops for harness; and it consists in a metallic loop, one of the branches of which is inclosed within the body of the leather carrying the buckle, and the other projects beyond the same, and is adapted to inclose the free end of the strap extending beyond the buckle, as will be hereinafter more fully explained.

In the annexed drawings, the letter A designates my improved harness-loop, consisting of a body-piece, *a*, about as long as it is wide, having two pendent parallel wings, *a'*, at right angles to it, and a bar or rod, *c*, connecting the free ends of said wings, at a distance from said piece *a* equal to one-half of the thickness of the main strap and the full thickness of the branch strap. The parallel side wings, *a'*, are made broad, and the position of the holes for the rod *c* is at an angle of about forty-five degrees or more from either side of the body-plate, thereby giving the body-plate sufficient length to prevent binding, which it is one of the main objects of this invention to avoid. The said bar *c* is secured to the wings *a'* at a point midway between the two sides of the body-plate, so that said body-plate will lie flat against and parallel to the tug B at all times, and not interfere with or be liable to catch and engage other portions of the harness and surrounding objects.

In illustrating my invention I have selected a hame-tug, B, and a trace, C, as the most suitable harness-straps for illustrating the advantages of my improved loop. The hame-tug B is passed through a buckle on the front end of the trace, or the tug through a buckle upon the rear end of the tug. In either case, especially when the length of the trace is ad-

justable to the length of the horse, there will be a branch or end, *d*, extending beyond said buckle, which it has been usual to pass through loops upon the trace or tug, as the case may be. These loops are of leather, and expand or contract according to temperature. They are also liable to become softened by exposure to the weather during rains, or to be frozen hard after saturation with moisture during cold seasons, thereby rendering the introduction of the end of the strap extremely difficult, and involving considerable loss of time.

My improved loop remedies all these defects. They are arranged at a suitable distance apart, and are attached to the buckle-strap as follows: One of its branches, *i*, is passed between the body-plate *a* and bar *c*, the other branch, *i'*, being outside. The two branches are then rigidly stitched together, thereby holding the loop in its position. The strap B is then passed through the buckle in the usual manner, and its free end passed under the body-plate of the loop aforesaid. These loops, being made of metal, contract or expand very little, and cannot become softened, and are, consequently, at all times ready for use. Their exterior faces may be gilt, silver or nickel plated, or covered with an enameling to prevent rust.

The bar *c* is sometimes separate and distinct from the loop-body, and is connected to its wings by a screw-joint. In this case a bearing is formed between the branches *i i'* of the strap, and the loop-body being placed in position, the journal-rod *c* is passed through a perforation in one of the wings *a'*, and being forced through the branches of the strap, its screw-threaded end is engaged with a threaded perforation in the other wing, thus completing the loop.

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

A metallic harness-loop consisting of a flat top plate with centrally-tapering side wings or extensions, and a detachable cross bar or rod, all substantially as shown and described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

EDWIN A. FORMAN.

Witnesses:

WILLIAM S. BARNES,  
MILTON M. PERRY.