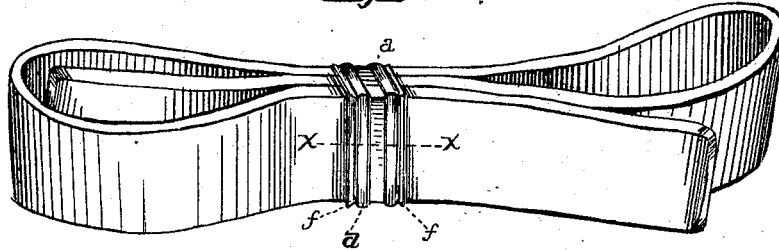


D. A. JOHNSON
Metal Loop for Harness.

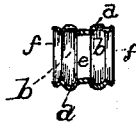
No. 203,919.

Patented May 21. 1878.

—Fig. 1.—



—Fig. 2.—



—Witnesses:—

Chs. E. Lewis

A. C. Eader

—Inventor:—

David A. Johnson

By his Atty.

Chas B. Mann.

UNITED STATES PATENT OFFICE.

DANIEL A. JOHNSON, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF HIS RIGHT TO RUFUS S. MERRILL, OF SAME PLACE.

IMPROVEMENT IN METAL LOOPS FOR HARNESS.

Specification forming part of Letters Patent No. 203,919, dated May 21, 1878; application filed April 1, 1878.

To all whom it may concern:

Be it known that I, DANIEL A. JOHNSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Metal Loops for Harness, of which the following is a specification:

My invention relates to metallic loops for harness, to be used in place of the ordinary leather loops.

Among the objections to leather loops is the difficulty to get a strap through them when wet; they soon become flattened and unsightly; the stitching that holds them rips, and their utility is destroyed.

I am aware that metal, vulcanized fiber, and other harness-loops, different in construction, are old.

If such loops are made of cast metal, they are entirely too heavy, and would have the effect, if used exclusively, to materially increase the weight of a harness. If made of thin sheet metal, they are easily crushed or jammed, and as heretofore made the entire inner surface of the loop bears on or clasps the strap, making it difficult to adjust the loop if the strap be expanded by moisture.

The object of this invention, therefore, is to provide a metallic loop for harness of light weight, strength to resist jamming, capable of ornamentation, and which will clamp the strap as little as possible, thereby being easy to adjust, and which can be produced at low cost.

The invention consists of a seamless loop, having internal grooves extending around in a transverse direction on all sides of its surface, and with flaring or slightly flanged edges, producing an improved article of manufacture.

In the accompanying drawing, Figure 1 is a side view of a loop embodying my invention. Fig. 2 is a section of same through line *xx*, Fig. 1.

The metal loop is seamless, being drawn or pressed from sheet-brass into the form of a tube, which is then cut into sections of a length desired for the loop, the sections being then pressed into the proper form, and upon the exterior surfaces ridges *a* are formed by pressing the metal outward by means of suitable dies, thus providing internal grooves *b*, which extend around on all sides, thus accomplishing the object in view, which is to diminish the bearing-surfaces *c* on the inner sides of the loop, whereby the loop may fit the strap snugly, and yet the friction be so slight as to allow it to be easily adjusted. Another object in view is to strengthen it. An incidental advantage is, the raised exterior surfaces burnish up readily, and, by contrast with the sunk portion not burnished, afford a very ornamental and handsome finish.

The edges are slightly flaring or flanged, as shown at *f*, whereby entrance for the end of a strap is facilitated, and all tendency to scrape the strap is obviated.

I claim—

As an improved article of manufacture, the metal harness-loop provided with internal transverse grooves *b* on all sides, and having flaring or slightly-flanged edges *f*, as set forth.

DANIEL A. JOHNSON.

Witnesses:

STEPHEN H. TYNG,
MALCOLM C. GREENE.