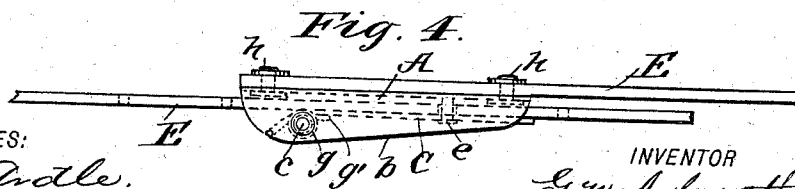
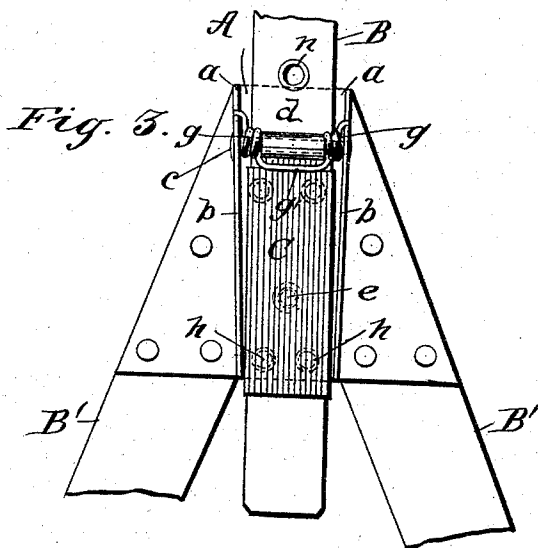
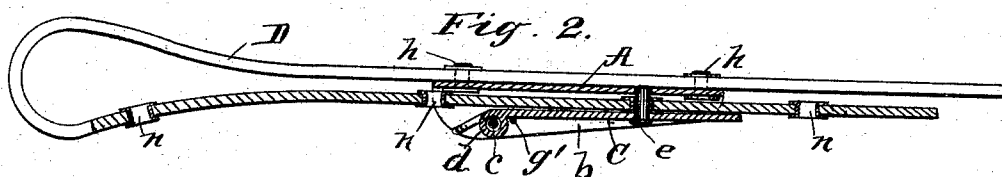
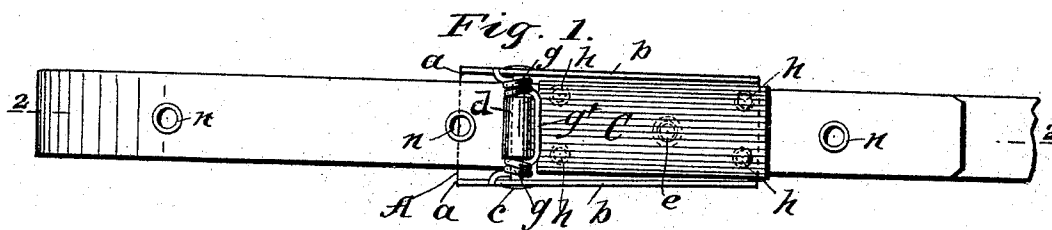


(No Model.)

G. M. AYLSWORTH.
BUCKLE.

No. 492,256.

Patented Feb. 21, 1893.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE M. AYLSWORTH, OF COLLINGWOOD, CANADA.

BUCKLE.

SPECIFICATION forming part of Letters Patent No. 492,256, dated February 21, 1893.

Application filed November 12, 1892. Serial No. 451,831. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. AYLSWORTH, of Collingwood, in the Province of Ontario and Dominion of Canada, have invented a new and useful Buckle, of which the following is a full, clear, and exact description.

My invention relates to an improvement in buckles, and particularly to such as are used to adjustably connect parts of harness for draft animals; the objects being to provide a buckle which is of simple and cheap construction, which is reliable in service, which is convenient to adjust for an attachment or release of parts it connects, and which is of general utility as a harness buckle.

To these ends my invention consists in the peculiar construction and combination of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a top view of the buckle, connected to a strap which is folded to produce a loop and the lapped parts secured together by the buckle; Fig. 2 is a longitudinal partly sectional view of the looped strap and improved buckle, on the line 2—2 in Fig. 1; Fig. 3 is a top view of the improved buckle applied to parts of harness so as to adjustably connect two diverging straps to another strap; and Fig. 4 is a side view of the buckle attached to a strap end and adjustably connected to another strap end portion.

The frame A, of the buckle, is formed of a sheet metal blank, cut to shape by proper mechanism, and then bent at *a, a*, oppositely and in the same direction, at right angles to the intervening flat portion or web piece of the frame.

The wings *b*, that are produced by bending the frame blank as stated, are preferably rounded on the edges at each end, as shown in Fig. 4, and slope or diminish in height from one end of the frame toward the other end. At a point near the frame end where the wings *b* are of greatest height from the web piece, opposite perforations are formed in the wings, for the reception of a transverse pintle *c*, that when engaged by other parts that will be de-

scribed, is riveted or otherwise secured by its ends to the wings through which it extends.

A preferably sheet metal keeper plate C is an essential portion of the buckle, and consists of an elongated flat piece of plate metal parallel on the side edges, and notched on one end at opposite corners to reduce the width of an end portion of the plate, which part *d* is then bent into scroll form, of a size diametrically which will allow the scrolled end to be placed upon the transverse pintle *c*, and loosely fit the same, so that the keeper plate and frame of the buckle will have a hinged connection produced by the pintle when said parts are assembled. There is a tongue *e*, preferably formed of a rivet, inserted through a perforation in the keeper plate C, and secured thereto by its head, at the transverse center and near the free end of said keeper, which tongue projects at right angles to the part it is affixed upon and is of sufficient length to have a locking engagement with an opposite perforation in the web-plate of the frame A, as indicated in Fig. 2.

Upon the pintle *c*, the coiled wire springs *g*, are placed, said springs occupying the portions of the pintle that are not embraced by the scroll *d*, there being an integral loop *g'*, produced between the two spring coils, which loop rests upon the upper surface of the keeper plate C. The outer ends of the coiled springs *g* are secured to the wings *b*, at opposite points, and the springs are wound upon the pintle so as to cause the loop portion *g'* to press the keeper plate C toward the web of the buckle frame.

The completed buckle is attached upon a portion of the harness which is to be secured to another part of the same, preferably by rivets as at *h*; these passing through aligning perforations in the web plate of the buckle frame, and a strap whereon the buckle is to be affixed, the end portions that project beyond the latter having washers placed upon them and affixed in place by riveting, as usual.

The improved buckle is adapted for use to connect two flat lapped straps E, as shown in Fig. 4, or to produce a loop at the end of a rein or other strap D, as represented in Figs. 1 and 2, or adjustably join a single strap B with two angularly diverging straps B', as in-

icated in Fig. 3. Preferably the strap perforations which are to be interlocked removably with the tongue *e*, of the buckle, are protected with eyelets as at *n*, which will prevent injury to the straps, and facilitate the adjustment of the buckle.

It will be seen that to form a loop on a strap end which is provided with one of the improved buckles, the free end portion of the strap, such as D, in Figs. 1 and 2, is folded toward the heel of the buckle, and inserted between the frame web plate and the scroll *d*, of the keeper plate, space being provided to allow such an insertion. The keeper plate that is at the same time raised so as to permit the strap end to pass freely through the frame A, is released when the tongue *e* is opposite the proper hole *n*, in the inserted portion of the strap.

The spring-pressed keeper plate C, will project the attached tongue *e*, through the hole in the strap it is opposite, and also through the aligning perforation in the web plate of the buckle frame, so that there will be a secure interlocking connection of the folded parts of the strap D, produced.

When the end portions of two straps E are to be connected as represented in Fig. 4, the buckle is riveted or otherwise secured upon one strap near its end, and the other strap end having spaced perforations in it, is inserted through the buckle frame from the heel, or scrolled end of the keeper plate C, the connection of the tongue *e* with a perforation in the inserted strap being effected as has been already explained.

The improved buckle, in all cases where used, obviates the need for a keeper loop on the strap to secure the end of the strap from flapping, as the keeper plate C, of the buckle

is adapted to press the parts of the strap together and render a loop unnecessary.

It is claimed for the improved buckle that it is very light, neat in appearance, strong and efficient in service, and convenient to adjust as it dispenses with considerable of the handling that is necessary to release straps connected with buckles of ordinary form.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A buckle consisting in the plate A having means for securing it to a harness and formed with integral longitudinal side flanges *b b*, a pivot *c* connecting the rear ends of the flanges a tongue extending longitudinally between the said flanges, pivoting on said pivot and having a stud projecting from its inner face at its outer end into an aperture formed in the plate, and a spring bearing on the upper side of the tongue at its pivoted end, substantially as set forth.

2. As an improved article of manufacture a buckle consisting in the base plate having integral longitudinal flanges *b b* and provided with attaching apertures and a stud receiving aperture, a tongue pivoted at its inner end between said flanges and provided at its free end on its inner face with a projection or stud to enter the aperture therefor in the plate and the tongue operating spring coiled on the tongue pivot at opposite sides of the tongue as shown at *g g* with its ends engaging the flanges *b b* and its cross piece *g'* bearing on the outer face of the tongue, substantially as set forth.

GEORGE M. AYLSWORTH.

Witnesses:

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