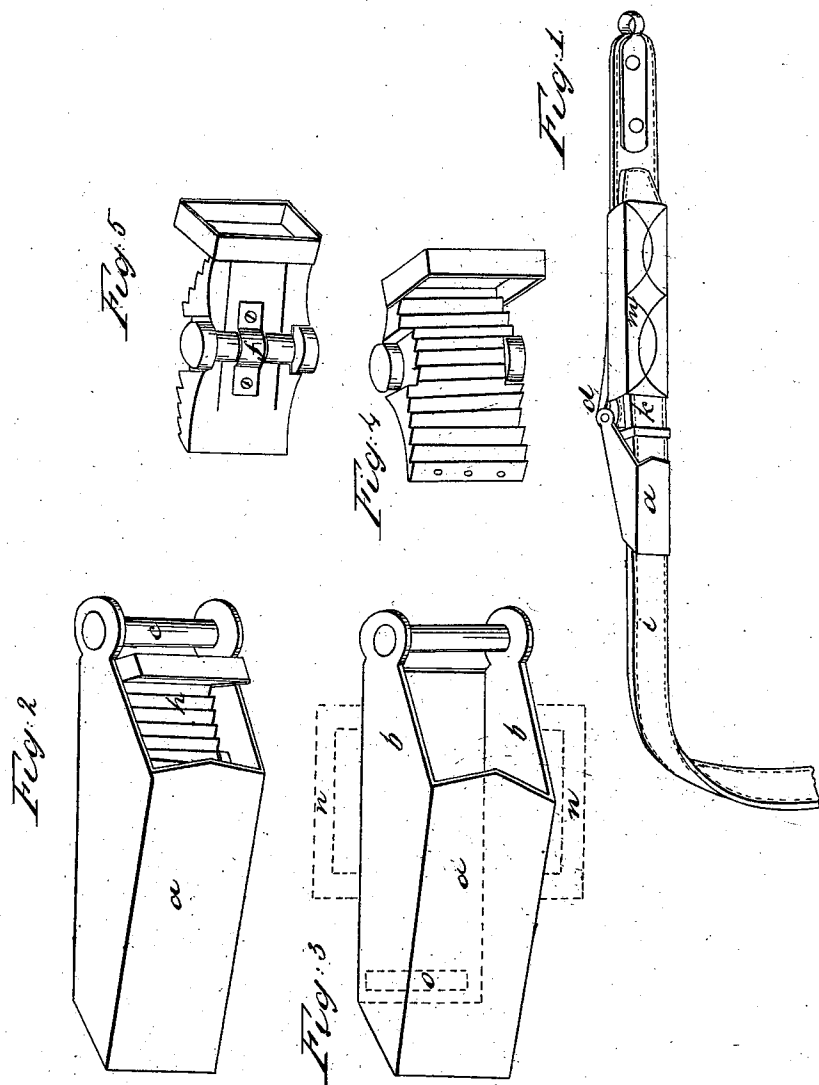


W. D. Hillis,

Buckle,

N<sup>o</sup> 4,943.

Patented Jan. 26, 1847.



# UNITED STATES PATENT OFFICE.

WILLIAM D. HILLIS, OF CUYAHOGA FALLS, OHIO.

## HARNESS-BUCKLE.

Specification of Letters Patent No. 4,943, dated January 26, 1847.

*To all whom it may concern:*

Be it known that I, WILLIAM D. HILLIS, of Cuyahoga Falls, in the county of Summit and State of Ohio, have invented a new and  
5 Improved Mode of Fastening Tugs or Draw-Straps of Harness to Hame-Tugs; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the model, embracing the hame tug, buckle, and  
15 a part of the tug or draw strap. Fig. 2, a perspective view of the buckle detached from the hame tug and draw strap. Figs. 3, 4 and 5 are sectional views of the same in different positions. Figs. 2, 3, 4 and 5  
20 being drawn on a larger scale than Fig. 1.

The nature of my invention consists in the construction of an apparatus which will serve all the purposes of the common buckle, without the use of the tongue, and the consequent necessity of perforating the draw  
25 strap with holes, and also the convenience of taking up, or adjusting the draw tug to any desired length.

To enable others skilled in the art, to  
30 make and use my invention, I will proceed to describe its construction and operation.

I construct a metallic oblong box, let *a*, Figs. 1, 2 and 3, open at both ends, of equal width perpendicularly, but of unequal thick-  
35 ness, the front and back sides of the box forming relatively to each other an inclined plane, the opening in the front end of this box is sufficiently large to admit the metallic plate and roller hereafter to be described,  
40 together with the draw tug or strap.

The parallel sides of the box which are marked *b, b*, Fig. 3 extend farther than the back plate, and receives the pin *c* Figs. 2 and 3, around which the hame tug passes as represented at *d*, Fig. 1.  
45

I construct a metallic plate with a rough front surface as represented in Fig. 4, and on the back side of this plate I affix the roller *e* Fig. 5, which runs in grooves near  
50 each outer edge of the plate, and is held in its proper place by the cap *f*, Fig. 5.

A band *g*, Figs. 4 and 5 is attached to the front end of this plate through which the tug or draw strap is passed. I place this  
55 plate with the roller, inside of the box *a*,

the roller resting upon the back side of the box and the rough side of the plate being in front as represented at *h*, Fig. 2. The draw tug *i* Fig. 1 is passed in at the small end of the box *a*, leaving the plate resting  
60 upon the back side of the box, as shown at *k*, Fig. 1. Now, by pulling upon the tug, the plate and roller will be drawn into the tapering box *a*, and thus press the tug *i* firmly between the front side of the box and the sliding plate, and an increase of draft upon the  
65 tug will increase the pressure upon the tug within the box, thereby holding it firmly in its proper place. In lengthening or shortening the tug, the plate can be moved  
70 upon the tug by taking hold of the band *g*, Figs. 4 and 5, thus the tug can be lengthened or shortened at pleasure or entirely drawn out of the metallic box.

The sheath *m*, Fig. 1, into which the end  
75 of the tug passes after leaving the metal box, is attached as usual to the hame tug and should extend to the end which is attached to the metal box.

In the construction of this buckle or fastening, the pin *c*, Figs. 2 and 3 may be dispensed with and the hame tug riveted to an extended portion of the back plate of the metallic box. The box may be made of  
80 plated metal, plate brass, or sheet iron, or it may be cast. The plate and roller may be made of either cast or wrought metal, the whole should correspond in size and strength to the purpose for which it is intended. The style of finish should also  
85 correspond with the other portions of the harness.

If it is desired to fasten the pad and girth to the tug, attachments indicated by the dotted lines at *n*, Fig. 3, may be affixed to  
90 each side of the box. The breech strap may pass into the box with the tug, or which is better, pass through an aperture *o* Fig. 3, in the back plate of the box. This aperture may, if desired, be made in the front plate  
100 of the box.

The advantages of this method of fastening over the common tongue buckle, are various, and consist first, in beauty. It will be a great ornament to a harness. Second,  
105 in strength, about one half of the strength of the common tug is lost by the holes for the buckle tongue. Third, in economy of leather. A tug with this fastening requires about one half the usual quantity of leather  
110

for the same strength. Fourth, durability, the tongue of the comon buckle tears, and the ring indents and will soon materially injure the tug. But with this fastening, the  
5 large surface pressing the tug, cannot indent it. Fifth, in convenience. The tug may be lengthened or shortened in a moment of time, and with no trouble. Finally, its advantages over other known methods of  
10 fastening the tug, consists in the convenience with which it is worked, in lengthening or shortening the tug; the little wear to the tug from the large surface pressing it, and in its being undivided, and in security, as  
15 when the tug is loosened, upon being drawn,

it fastens itself. I call this invention "The self fastening buckle."

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

The application, for the purpose of fastening and holding the tug of a harness, 20 of the plate Figs. 4 and 5, with the roller, between the tug to be held and the back plate of the box, in the manner herein described.

WILLIAM D. HILLIS.

Witnesses:

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