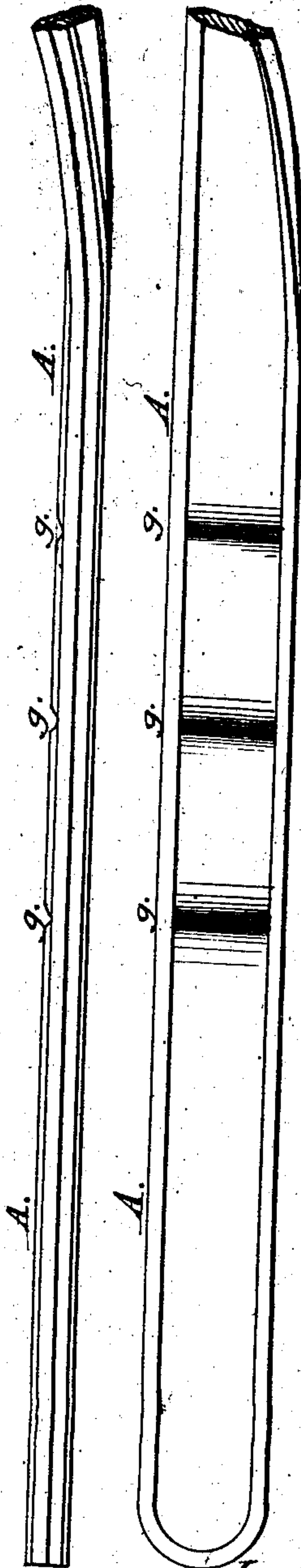
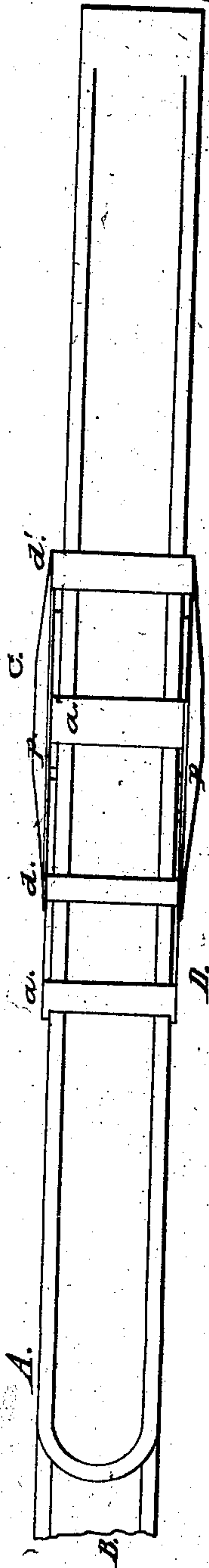


G. A. Brown.

Buckle.

N<sup>o</sup> 86,501.

Patented Feb. 2, 1869.



Witnesses:  
O. P. Tinsell  
Henry C. Briggs

Inventor:  
George A. Brown



# United States Patent Office.

GEORGE A. BROWN, OF KALAMAZOO, MICHIGAN.

Letters Patent No. 86,501, dated February 2, 1869.

## IMPROVED BUCKLE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE A. BROWN, of Kalamazoo, in the county of Kalamazoo, and State of Michigan, have invented a new and improved Tongueless Buckle for Harness; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to certain improvements in tongueless buckles, which are constructed in two parts, and consists mainly in providing the parts which bear against each other with projecting ribs, which clamp into the trace.

It also consists in making the connecting-bars curved upon the bearing-sides.

The details of construction will be fully described hereinafter.

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

I construct my buckle in two separate parts, as shown at C D in accompanying drawing.

The first part D, I make from two strips of metal, semicircular in shape, connecting them at ends with bars the required distance apart, as shown at *a a'*, one of which is curved, as shown.

At a point near the centre of the part D, I construct a connecting cross-rod, to which I attach the hames, tug, or strap, as the case may be, as shown at *d'*.

Under the cross-bar *a'*, on the part D, extending along the length of its under surface, I make a rib or projection, *P'*, the purpose of which is to draw down and indent itself into the leather, in the operation of buckling.

I construct the other or second part, C, of my buckle by connecting two metallic plates by cross-bars at the ends, turned or curved at the ends, as shown at *d d'*.

On the bottom side of the part C, I attach a bed-plate, connecting the two strips at *b'*, leaving a sufficient opening in the end *d'* to admit the tug, which plate extends along the under surface of the plates, nearly filling the space between them, to a point at the other end, leaving a like opening for the tug at *d*.

This bed-plate *b*, from the place of attachment to the two plates at *b'*, is made just wide enough to fill the space between the plates, and allow the plates of part D to slip between it and them in the operation of the buckle, as hereinafter specified.

At a point near the centre of the second part of the bed-plate *b*, at *P''*, I construct a like rib or projection, as at *P'*, extending across the bed-plate *b*.

This projection *P''*, placed at an angle from a point

directly under *P'*, has for its object, in the operation of the buckle, to indent itself into the leather on the under side of the tug or strap, and acts upon the tug with a clamp, as well as leverage power, holding it securely wherever placed.

At points left of the centre, on the upper inner surface of the plates of the second part C, I make short projections, as shown at *P P'*, to draw against the plates of the part D, causing the projections on the two plates, as above specified, to press more tightly on the leather.

Both parts of the buckle are made of cast-iron.

When the buckle is to be subjected to considerable draught, I construct the tug as shown at *g*, by grooving the filling used in making the tug between the leather straps at given distances, as required for taking up or letting out, which makes a crease in the tug in those places, as shown at *g*, and into which the projections *P' P''*, on each side of the tug, fit and firmly hold.

In operating my invention, I attach the two parts, by slipping the first part into the second, as above described, over the bed-plate *b*, back of the projection *P*. I then pass the tug or strap into the end of the second part, at *d'*, along between the projections *P' P''*, under the cross-bar at *d*, and through the end of the first part at *a*, as shown. The first part of the buckle is then pulled down upon the strap or tug, and the projections *P' P''*, clamping into the leather, fit into the creases in the tug. The two parts are now securely held in place as adjusted, as above set forth. The tug is lengthened or shortened by simply contracting the length of the buckle by pressing its parts together, thus relieving the clamp and leverage-power upon the tug, when it may easily be moved to the point desired.

By this construction and arrangement, a strong and desirable buckle is produced. The curved surfaces of the bearing-bars permit the trace to slip easily, when it is desired to make a change, while the ribs firmly clamp the trace when it is in use.

Having thus fully described my invention,

What I claim, and desire to secure by Letters Patent of the United States, is—

The buckles described, consisting of the half, D, having the bar *d'*, with projecting rib *P'*, and half, C, with bed-plate *b*, having the projecting rib *P''*, the remaining bearing-bars being provided with curved surfaces, and the whole being used in connection with a plain or creased trace, in the manner described, for the purpose set forth.

GEORGE A. BROWN.

Witnesses:

O. T. TUTHILL,  
SIDNEY COOKE.